



The Adam - Knox's Land opposite the Alms
a Guild whose occipital bone is absent

1/10/4
1/20/2/1/3

RAT 19.

Family Library

148 b 2

The extreme vessels too should be so tender as to
endanger rupture, from the slightest cause, where
they bear very considerable pressure.

Besides: Boerhaave considers the yellow ar-
tery as the aorta of the next order, & so on
to the lowest, while each set is conical &
ramose. The retardation of the blood increasing
therefore in a progressive series, the motion in
the extreme branches will be to that in the aorta
as the unit to the 10th power of the num-
ber 20. If therefore in the aorta the blood runs
thru 150 feet in a minute, it will run thro' the
 $\frac{1}{100,000,000,000}$ in the extreme artery during
the same time.

Now, in fact, the thing is quite the re-
verse. - The perspir'd & nervous fluids move with
great rapidity. Senac says that thin fluids
are little liable to obstruction; but they are

2. as liable to be impeded from the increasing Diameter of the Branches, from the dilatation of a branch shaped like a converging cone, & from friction, as any fluids whatever.

Veins. - were much better known to the Ancients than Arteries. They were thought the seats of Diseases & it was reckoned important to draw blood from the one nearest the part affected. - They are not so universal as Arteries. The palmer. worm has arteries but no Veins. & in a human Monster where the heart was wanting the veins were so too. - The shape is conical & the diameter of the Branches greatly exceeds that of any Trunk. - The colour is blue induced by the purple of the blood & the whiteness of the skin. - The veins have not that tendinous structure which the Arteries possess, nor muscular fibres. - The inner membrane or coat is smooth as in the Arteries - The middle one

is muscular in the the (ava nearest the heart,
so as to produce pulsation, but in no other
place. There are some flexible red fibres follow-
ing the course of the Vein. - There are sometimes
cellular Tubercles at the divisions of Veins.

The cellular coat is thinner than that of the
Arteries. Veins have little arteries & perhaps
nerves of their own. They are however little im-
mortal, hence they are gorged with blood after death.

The thickness of the Veins is much less than
that of the corresponding Arteries. The Aorta
is 14, 15, or 16 times thicker than the (ava. -

The coats of the Veins are so dense that their
specific weight is greater than that of the Arte-
ries, as 26 to 25 or thereabout. - The density
of the Veins however does not increase with
as that of the Arteries does. - Veins ~~are~~ ^{are} not
so easily ruptured as Arteries, because they

⁴ admit Distention. Immense sinus are found. The spermatic Vein has been increased to an inch Diameter. Hales found the Jugular V. enlaid without rupture a column of water 175 feet, and the Lardid which is so much thicker was broken by 190 feet. The V. cava of a ram near the origin of the renal Veins was broken by 176 lb. \S IV. the artery at the same place was broken by 158 lb. \S XI. hence the strength of the Vein to that of the Artery was as 1110 to 1000. At the origin of the Iliacs the proportions were 1053. to 1000. - The Veins of the feet are generally the strongest. - Arteries going to a secretory organ are generally stronger than the corresponding Veins - The renal Veins are to the Arteries as 1000 to 4088 - Those of the spleen as 1000 to 4336 - or 4812. - In an old dog the strength of the Aorta was to that of the Iliacs as 1000 to 1097. -

Varices & rupture of Veins are much ⁵more frequent than Aneurysm and rupture of Arteries. -

The Diameter of the Veins is greater than that of the Arteries in diff^t proportions according to the place, but it may be set down in general as being in the proportion of 9 to 4.

The number too is much superior. There are many plexuses ex gr. on the neck, back of the hand, the fingers, the inferior part of the thigh &c. to w^h there are no corresponding arteries. - There are also many internal plexuses accompanied by few arteries - The coats of Generation &c - The number is equal in the Intestines - There are two arteries to one Vein in the Umbilical Cord, penis, clitoris & gall-bladder. - There are several capsular & renal arteries to one Vein. -

6 The Vena azygos has no corresponding artery & seems formed merely to return the blood from the intercostals, which had no opportunity of being inserted into the Cava, from the pericardium to the sulcus of the Liver.

The Valves of the Veins distinguish them still more from Arteries. They are composed of the inner membrane. They are sometimes lacerated by the venous blood. & Their shape is parabolic. -

The number is different. Generally two, tho' sometimes 3, as in the crural vein sometimes. In the smaller branches they are solitary, & they do not shut so accurately as the others. -

Valves are wanting in the whole system of the Vena portarum, in the phrenic, renal, vasa brevia, Vena cava, Veins of the Mesenteries, uterus, Lungs, but not in a Dog or Sheep, & brain; also in all the veins to & from a

Line. - They are not found in cold-blooded Animals. -

They are found in the lower parts of the Vein - the clac to wit. The beginning is different at different times. - In the hypogastries, the veins of the penis & Clitoris have many of them. The crural vein both before & about the origin of the Saphena has many of them. They are also in the popliteal. -

They are sometimes found in the Vena Azygos, more rarely in the Intercostals. Two Valves are placed in the mouth of the internal Jugular. altho' they do oppose the return of the blood to the heart, they permit it in some degree as may be seen on the expiration of any Animal. - The vein too admits of dilatation which is necessary in many exertions of the adult & situations of the fetus. -

8 In the left internal Jugular, a Valve is placed over the chyloferous duct to prevent the blood from flowing into the Thoracic Duct. There are few in the External Jugular. There are many in the lingual, faecal & tonsillar branches. - In the subclavian there are generally 2, & many in the Veins of the Arm. -

It appears that the Valves are most numerous in perpendicular Veins, & in those that lie next the Surface. - Viviparous Quadrupeds have more than Man. -

Veins arise from arteries - 2^{dly} from Cavities - as in the penis, Vitoris, Crista &c. - Do they resort the matter of Exhalation? Haller thought so, the late Lymphatic Discoveries - prove this to be an Error. - A solution of opium thrown under the skin produced convulsions sleep & at last killed the Dog with universal rigors. - But this was not taken

up by the Veins. At least it don't follow
Tying or obstructing the Veins produces Dropsy
of various kinds. - A Ligature on the Jugu-
lars produces edema in the head; on the
Femoral Veins, the same in the feet; from a
Tumour in the lower belly, an ^{ascites} ~~edema~~
from a schirous mesentery, a tumour of
the Prostate. The foot swells from a scle-
rom & the arm from a schirous in the
Axilla. - Similar Examples are innume-
rable. - Absorption of this kind is more u-
niversal than can be accounted for from the
extent of the absorbent system & takes place
where absorbents have not been found, as
in the brain.

Red Veins likewise receive roots from
the pellucid Veins of the Eye - - Do they also
receive them from the Lymphatics? They are
+ These did not succeed with Haller, perhaps
because the animal died too soon.

10 at least capable of being inflated from the R. Veins, especially in the spleen of a calf. But as all the lymphatics however distant are collected into the Ductus Thoracicus, the many Veins lay nearer in their course, & as it seems incredible that Nature should secrete Lymph from the Arteries merely to pour it into the Veins, 'Tis probable that the fluids pass from the Veins into the Arteries & from these into the Lymphatics.

Do Lymphatics terminate in red Veins? -

They have been traced into the Jugulars, the axillaries, the subclavians &c. But others have been unable to trace this connexion & the analogy of nature is strongly on the other side. - For

1st The Lymphatics of the Loins are near red Veins, yet they pass on a great way in order to reach the Ductus Thoracicus -

By those of the Liver neither enter the ca¹¹
vior the Vena Portarum -

3^{dly} Every branch can be traced into a
larger one, then into a Trunk, then into
the D. Thoracicus. -

4^{thly} - The same thing is true with regard
to the red Veins - The branches are not im-
mediately inserted into the nearest trunks.

5 The Ductus Thor.^l manifestly passes the
nearest Laver & goes to the Subclavian - why?
To receive the Lymphatics from the neck &
upper Extremities. -

The Lacteal was traced thro' 5 Glands in
the Mesentery. - Is the Lymph poured out into
Glandular cavities, or does it go directly
from the inferentia into the efferentia? Mal-
pighius says it is effused & quotes an Expt
in wh^{ch} it was so. - Albinus says this effu-
sion was from rupture, & that if it were

12 to take place, the effus'd matter could never be resorb'd - A milky matter diff^d from Lymph is effus'd into the Gland & absorb'd by the vasa efferentia. -

The conglobate glands are very numerous. What is their use? As they are larger & more juicy in young than in old animals, they may be suppos'd more useful to those. - The fluid of the glands dilutes that in the Lymphatics. -

Malpighius suppos'd them to be a kind of little hearts serving to propel the Lymph - hence he said they were more numerous in the thigh of man because he was perpendicular. But they have very few nerves & no muscular fibres. - So far are they from propelling the Lymph that stagnations are no where so frequent as is seen in Scurvy, Schirrus, &c. & Haller seems to think the free use of the Pa

13
tates dangerous ^{along with inactivity} ~~to young people~~ ^{sterilizing}
to produce schimus.

Others suppose that a rough Liquor
flows from the Nerves into the conglobate
glands - Others that animal Spirits are there
formed - & so forth. -

The ancients believed that the Veins con-
tain blood, the Arteries air. *Lucius* says,
Spiritus ex pulmone in cor recipitur, et per
arterias distribuitur, sanguis per Venas. &c. &c.
Lib. II. - Galen confuted this conceit. - The
whiteness of the Arteries may have misled
the Ancients, & perhaps they may even have
discovered air in blood-vessels, wh. sometimes
happens especially in warm weather. -
Some blood continues in the Arteries after
death, the greater quantity passes into the
Veins. -

14 The Valves of the veins prevent the blood from flowing back in consequence of muscular pressure - Hence they are most frequent about the Joints, for in the bowels where there are no Muscles, they are unnecessary. This use of the Valves may be even demonstrated by Injection - Tho' after death more of the injection can pass the Valves than of blood before it - both because the Vein becomes lax, & the valves lose their vital power. Nevertheless air thrown into the iliac Vein descends to the feet - Milk thrown into the vein of a Man, towards the hand, returned at first, then swelled the inferior Veins proceeding towards the fingers with a sense of cold, & after 15 minutes when the wound was unbound, no milk flowed with the blood. - But this only shows that the resistance of the Valves may be overcome. -

The Valves sustain the weight of the blood - hence¹⁵
they are very numerous in the Legs - Some
times however Varices arise, & prove fatal
from the great quantity of blood poured out.
These happen where the Valves are most
numerous as in the Leg; & also where there
are none, as in the V. portarum.

Ligatures about the neck, when too tight,
produce suffusion, epistaxis, inflammation of y.
adnata, & even apoplexy. - Ligatures about
Joints sometimes stop hemorrhages from dis-
sant parts.

The quantity of blood too that flows from
an Artery evidently proves the circulation of it.
The Jews cut the Carotids with a very sharp
knife & bleed the Animal till the flesh become
pale because their Law forbids them to eat
blood. - Even the imperceptible vessels of the

16 Teeth have produced mortal hemorrhagy - as
happend to Gassius & Paulina the wife
of Seneca. - A hemorrhagy to 40 pounds has
taken place from the Nose - fatally - tho' the
vessels were small & open'd only, not ruptur'd.
Veins too can produce mortal hemorrhagies,
tho' it is necessary to use some precaution
to prevent the sides from closing - In this way
perish'd Seneca & Petronius Arbitor -

Infusions acid or poisonous, affect the in-
ternal parts not the remote - Poison'd arrows
dip'd in the Juice of the Thora, or of the white
hellebore, kill suddenly tho' the wound be
small & they make the flesh soft & tender. -
The Indians dip theirs in the milky juice of
a Tree not yet sufficiently known, & however
slight the wound be, they kill in 6 minutes
nay sometimes in one -

all the acids & strong spirit kill sudden^{ly}
by producing black, grumous blood in the
heart & Lungs. - Fumes of sulphur too pro-
duced death. - - Opium, wine, & weak
Spirits produce sleep, debility & death.

Mercury injected produced swelling in the
veins of the head & an effusion of Serum
into the Brain. -

Six grains of Tartar Emelic produced
fatal vomiting - resin of Scammony like
wise - & $\frac{z}{11}$ of Procus Metallorum had the
same effect - a solution of Senna produced
vomiting only not death - Dogs bear great
Doses of poisons & can hardly be killed by
Opium Licuta aquatica, or other vege-
table poisons - Borrichius says that the
same dose injected in a vein will produce
the same effect with an equal one swal-
-lowed. - $\frac{z}{11}$ Tincture Cantharidum injected

18, produced very copious urine, eroded the bladder & killed a dog - The Expt. was repeated with similar result. - Nitric produced ^a plentiful flow of urine, but not death. An infusion of arsenic injected produced borborygmi, convulsions, death. - Bile from a man dead of pestilence produced death, quicker when injected into the jugular than the crural vein. Oil of Tobacco produced death, but when the spirit was injected 10 drops only, vomiting & sickness alone followed. - A Decoction of it as well as of white hellebore proves fatal. - 31 pt salis ammoniaci thrown into the axillary vein killed quickly - sometimes coagulating the blood made black. - Solutions of nitric have also proved fatal, but the blood was always found red. - Scumy has been said to have been cured by injections of Scumy-graft, ulcers, gout, plica polonica, & Syphilis by injection.

tions of their respective remedies - Epilepsy ¹⁹
is not curable thus, because it is seated in the
nerves not in the blood. - Incredulus odi. -

The transfusion of blood from one Animal
to another proves the circulation of it. It may
be perhaps one day introduced in diseases of de-
bility, but has been hitherto confined to infe-
rior animals - A Sheep & a Fox were seized wth
disease after incautious transfusion the
last recovered by V. section, the former died
with inflamed Intestines. - Bloody urine,
effusion of blood into the Abdomen & death
in various shapes have been the conse-
quence. - In France an old Dog, by an
injection of young blood, became less deaf,
& more alert - Another equally old, became
fresh, & a 3^d suddenly recovered from a dis-
ease. - A horse 26 in at. recovered new

20 regour from the blood of 4 Lambs. -
Encouraged by these trials, similar at-
tempts were made on men. Blood was
drawn from a stupid young man & more
than he had lost was thrown into him from
a Lamb. - The event was rather favour-
able. - A Leprosy & Quartin were cured
in this manner. - Arthur Goga in En-
gland - a little wrong-headed, had some
sheeps blood thrown in at first without, but
afterwards with inconvenience. - But the
hopes of physic were dashed & its curio-
sities by cross accidents. - The stupid young
man became first frantic, then apoplectic,
& having died, the widow commenced a process
against the Transfusers. - Not deterred, they
transfus'd a Calf's blood into a young man
of the royal race - caliaco, et desperate

who died soon after & his intestines were
found siderati (what's that?) - the senate of
Paris forbade a repetition of a trial so dan-
gerous - In scorbutus it produced unhappy
effects. - 1873 There is always danger of co-
agulating in the Tubes, & the introduction
of this coagulum is most dangerous. -

Some have thought that Hippocrates knew
the circulation of the blood because he
speaks continually of the $\pi\epsilon\rho\iota\delta\omicron\delta\omicron\tau\omicron\alpha\iota\mu\alpha$ ^{ron.}
But this refers to opinions in Astrology.
All he knew was that the Pulse was oc-
casioned by the meeting of an adverse cur-
rent - suppose from above with one from
below. - Solomons wheel at the fester
has been thought descriptive of the same
thing, but it refers only to the wheel w.
which they used to draw water at the
wells, & means that no more water could
^{be drawn.}

22 Plato, Euripides, Galen & Irenaeus have all been quoted, but, all they knew was that there was some small communication between the Veins & Arteries that these might partake of respiration & those of nourishment. -

A man aged 40 after about 3 or 4 weeks illness was admitted into the Infirmary with a large pointed tumour in the region of the Liver accompanied with excruciating pain. He soon died. On dissection the Liver was found unusually large with an immense abscess on the upper surface of the right Lobe, which adhered by its integuments to the skin & muscles firmly. It contained lib VI of thin acid, purulent like matter. The abscess was very deep, but there were no marks of inflamma

lion except round the margin of the ²³
Imposthume - At least 3/4 of a similar
matter were found in the Pericardium.
The inner surface of this & the outer one
of the heart had a granulated appear-
ance, yet the Pulse was regular about
60 to the last - Its rupture by which
the matter could have pass'd from the
Liver to the pericardium could be detect-
ed - Had the effusion taken place in this
way after death, the corrosion might still
have happen'd from the great acrimony
of the matter - The rapidity of the dis-
ease was great -

Mr Hyge thinks the appearance of corro-
sion in this case, fallacious - Little knobs of
coagulable Lymph adhering firmly produce
it, but they are easily wash'd off -

23 The strength of the pericardium exceeds that of any other Membrane. In a dog, when it was the $\frac{4}{13}$ part of an inch thick it bore the weight of 6 atmospheres, & 18 hundredths, while the Aorta of a man tho' so much thicker bore only the weight of 4 Atmospheres with 7 tenths. In oviparous quadrupeds as the Tortoise & ~~Reptile~~ ^{Procodile} it is uncommonly strong, also in the Serpent & Fishes. In the Eel tho' hard & shining like a tendon, in the skate almost cartilaginous, in the Lamprey of seous, & the only part that is so. - All this is to supply the place of bone. >

Some have ascribed 2, some 3 coats to the pericardium, but Haller affirms there is only one. Many have described muscular fibres there, which however is a mistake. Many nerves penetrate the pericardium in their way to the heart, but few remain

in it. Hence it's sensibility is in ²⁴considerable & its wounds curd without much danger. —

Is there water in the pericardium during life? Some have denied, more have affirmed. In youth there is more than afterwards, & of a redder colour. — Sudden death shows it less than chronic disease. — Yet even after thunder, suffocation & strangulation it has been invariably found by Haller.

This water is not unlike the Lymph effused in other places — Whether red or pellucid it coagulates by heat or the nitrous acid. After pleurisy it frequently becomes so thick as to form adhesions — so that the heart is as if it were covered with grumous milk — Pus forms similar adhesions — Laminae are sometimes discoverable in the contents of the Pericardium —

25 Adhesions disturb respiration & by preventing the compleat evacuation of the heart, greatly increase its size.

The firm adhesion has made some deny the Existence of a pericardium - Sometimes its tenacity has had the same effect as in the mole &c. - but in fact it is found from the Elephant down to the lowest creature that has a heart.

What is the use of the pericardium? Not merely to retain vapour or water for moistening the mover, for that could have been done without it - but to fix the upper part of the heart that it might neither vacillate nor pull down the large vessels by its motion. - When it is removed the motions of the heart become irregular - It is strongest where the heart is unsupported by a Diaphragm. -

The water when sound in quality & proper ²⁶ in quantity prevents adhesions, & also moderates friction. At each pulsation the heart striking the ribs would undoubtedly produce tri-
-lure, ulceration & death, were it not for the interposed water. -

Whence does the liquor pericardii originate? not from glands situated either at the basis or the apex of the heart, for they do not exist; not from the Thymus, the colour of whose liquor is white, while that of the pericardium is red, & the latter is found, where the Thymus is wanting; (it being confined to various quadrupeds); not from glands, pores, or vesicles between the Membranes of the Pericardium itself for they have no existence, but from exhalant Vessels, as is presumed from the coagulable nature of the Liquor, & is fully proved by

27 Expt. If you throw a coloured injection into the coronary Arteries, whether it be saffron with water, using glass in weak Spt. or if an exhalation will take place from vessels formerly invisible - When there is resistance to the motion of the heart from obstructions in the Lungs, sometimes blood is forced out from the Auricles by the violent exertions of the heart to overcome the resistance - Absorption takes place here as in other cavities. -

The right Auricle of the heart is larger than the left - for 1st The pulmonary veins are less than the artery; 2^{dly} The difference of size in the Auricles appears even to the Eye; 3^{dly} Experiments prove it - The Disproportion is stated as 2 to 3, as Ven to Ar, & Haller in a Jachuses right auricle threw 2 1/4 Drachms, while the left would hold only 8. -

alkalescent plants. Principles, a vo-²⁸
latile essential & a diluted alkaline
salts. Stimulating, because it excites
sneezing & tears. The effects differ from
those of the former class; acids act on
the simple solid, the alkalescent act
only on the solidum vivum. They sti-
mulate the stomach, correct acidity
& promote the action of the intestines,
& heart. Hence they are useful to the
old. Internally they stimulate, external-
ly they repel. — They attenuate the flu-
ids. 3^{dly} Promote evacuations of every
kind, particularly expectoration. Leeks
affect the uterus. 4^{thly} They act as
antiseptic & antiscorbutic. Lalo mayor
thought his family escaped the plague
by the use of Cabbage.

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as plants both acescent & alkalescent plants cure the scurvy, the cure does not depend on the acid, but on some other principle, perhaps fixed air.

Sago grows in Malucco. The trees grow wild in the woods & is the food of the natives who are lazy to excess. It is bland, nutrimental, & mucilaginous.

Sugar. Locality of the plant uncertain. One says it came from America; 'tis certain the art of preparing it was imported from Africa according to Linnaeus, but it seems to have come from the E. Indies by the way of Madeiras. -

Sugar Candy is made of Musquavado or first produce of the Sugar. Acer & Birch yield Sugar also, but so small a

quantity, that it cannot be extracted.^{2d}
Sugar melts in flame, & is dissolved by
heat. It assists the solution of gums &c.
Distilled it yields acid, flame & earth,
mixed with much mucilage. Is very sin-
gular. - Sugar disagrees with dyspep-
tic people. Is supposed to spoil the teeth
but this may be owing to the Lime.

Sug^r. is a powerful antiseptic. - An
excellent vulnerary. - Stimulates, &
is laxative. Attenuates & resolves vis-
cidities. Cures ague Cakes. 4^{thly} It kills
worms. Worms that resisted aloes, were
killed by Sugar. 5^{thly} It corrects bad
tastes.

Roots —

Acescent - Murnip makes cattle loose
in their flesh. - Light food. Their juice
they promote expectoration &c.

Canot richer than Turnep & feed
horses well - Supposed good for broken
winded. Canot poultices recommen-
ed in Cancers. -

Seeds are hot carminative & said
to be an emmenagogue. -

Potatoe. Got from America & re-
sembles corn in yielding bread, starch
& fermenting liquor. - Is a light food
& gives good nourishment. Don't keep
so well as corn. All the rest of this
species are poisonous.

Alkaliescent - Onion. Decoction gives
a fine flavour, extract, none. Cured
Dropsey once. Promote suppuration. -

Radish - hot only in the outside. -

Seeds. without Shells are divided into
the Lulmiferous & Leguminous.

Barley the most ancient food especially³¹
among the greeks & hebrews. Dioscorus
says it grew wild in Sicily. It is esteemed
after wheat was known - hence soldiers
were punished by barley bread. - Phisana
came from the custom of decocting
Barley.

Oryza the food of all Asia. - Method of
preparing it. - Septic & unfermentable.
a spare diet. Is it good in dysentery
& other putrid diseases, if it be so prone
to putrefy? No. -

Wheat - The strongest food, which, ^{the}
said grows wild about Leontium in Si-
cily. Analysis - Amylaceous or part
dissolved in water - ^{kept acid 40 days.} Gluten - not dissolved
in water, but corrupted very soon. A
black powder remains which stinks
abominably. 31 of gluten was found

32
in lib 1. Gluten resembles the coagu-
lum of milk in many particulars.
Found only in one other plant. - Thought
to be the principle of nourishment, but
that is impossible. Mucilaginous part
rather. Wheat heavy in the form
of grain. Galen & his sons by eating
boiled wheat were much indisposed.
Boerhaave mentions a similar ex-
ample. owing perhaps more to the glu-
ten than the want of fermentation, as
rice tho' unfermentable is not so bad.
Flour applied to the feet by So-
lus Pompeius.

Bran is laxative. & used by horses.
Oats. More acescent. Commonly re-
counted hotter than other grains, perhaps
a mistake. Large bellies & obstructions
of the mesenteric glands are

imputed to it. —

33

Rye - The general food of the north.
applied as a poultice in anginous
cases. —

Buckbean.

Panic - The natives of Marseilles lived
on it during the siege. —

Bean. 1st used by men. - Windy & fit
only for hard-workers & was forbid by
Pythagoras to all his Scholars.

Pea. Like the Bean, good for food when
green, bad when dry. —

Porridg must have been made by slow de-
grees. Burning the straw was the 1st &
beating with cattle the 2^d method of re-
parating the water. Boiling as is
done in the East Indies with rice. - Boiling
discovered by accident. Quirns used by
the Britons before the Romans. —

3/4 Separating the coarser parts. - Sifting
& drying. Sarah knew this method.
Bakers only established at Rome 100
years before Christ. Fermentation in-
troduced & was known ^{to} the Israelites.
Leaven still used at Paris, as yeast is
condemned. Apt to give the bread an
acid taste. - - - - - Bisket, twice put
into the oven.

Milk. This the chief aliment ^{of some} nations
& important in medicine. First used in
Society. Shepherds preceded Agriculture.
Food of Children - perhaps in utero. -
1st Because there are 5 Reasons for it.
White from attenuated oil, sweet from the
salts. Capable of very various impreg-
nation. Suffers a natural decomposition.
Is coagulable by the juices of the stomach
of all animals & even of fishes. -

milk ought to be used warm before any decomposition begins to take place. — milk is acescent. — Becomes putrescent in Pouches w^h use animal food. — Dietetic medicinal & middle.

1st from ruminant animals. — Great varieties in quantity & quality. —

2ndly Asp. milk, little ^{cream &} cheese, more vapour & saccharine matter. Less acescent

Discorides recommends the heal of milk by putting it on the nail-ungui instil-
lulum non difficut, best improperly. —
Effects of milk in food. Already in some measure digested. The acid is coagled; its air is emitted; a coagulum is im-
-parted; & the fibrous destroyed. It con-
tains oil ready formed; coagulum,
salts & a serous part, all ready
to supply the wants of the animal
machine. — Cow milk too strong

36 for children, tho' taken in lig
tion. Coagulables in the Stomach.

1st Because every stomach contains
a power of doing so after death.

2^{dly} Women's milk the least coa-
gulable when thrown up is al-
ways coagulated.

Milk is useful in disease. Diets
is too strong; women's milk not laxa-
tive enough; mare's & ass's milk
like each other & most saccharine.
Arabians use no ass's milk because
they reckon it antiphlogistic.

1st Milk is antiphlogistic & sedative.
Milk & water colder than water, &
people sleep after taking asses milk
in a morning. Lelius says, pro
veneno est, & in fevers especially
the typhus tis so. - In hectic

34
& phlogistic diseases ^{is} our prin-
cipal remedy. Particular & general
hectics - The last after the variola
& oncorbilli, & always of the phlogis-
tic kind. Food ought to be wholly
of ass milk. - Another species is ~~of~~
seen in old people - hectica seni-
lis. Characterized by want of appe-
tite, heat after eating, & want of
sleep. A little bleeding & ass milk
wid only for diet have cured many.
In tropical phthisis, ass milk recom-
mended by all from Hipp. to Horne.
Two stages; Inflammatory & Purulent.
1st from a glandular affection. -
milk here useful. After suppuration is
formed there is a remission. Here milk
corrects the alkalescence & sheaths
the acrimony by its oil.

After the remission is the fittest time
 i.e. in the morning. Ought the food
 of the animal to be altered? The opi-
 nions on this subject are whimsi-
 cal. - Milk is useful in hemor-
 rhages whether active or passive.
 In old coughs with phlogistic dia-
 thesis 'tis good. - In gout too it has
 been found serviceable. Many men-
 tion it as an efficacious preven-
 tive. - Is it then entirely ^{adverse} of the
 nervous system? Cornaro got a fe-
 ver by increasing his diet & a
 gentleman after living years on
 milk took to Beef-stakes to break
 fast w^out any bad consequence.
 This not generally the case.
 2^{dly} 'tis serviceable in a purulent
 hectic from its antiseptic power.
 Said by one to have cured the
 scurvy. -

It is antacid & antispasmodic. Sydenham³⁹
cured hysterical patients by it. - After
mercury tis the best diet.

4thly It is emollient. hence useful in
mania where the brain is often
found hardened. - The best method
of employing it. -

1st The prima via must be cleans-
ed by a vomit & a little rhubarb.

2d It must be given in the morning
& never in the afternoon except when
there is no fever.

3dly The quantity must be pro-
portioned to the strength of the sto-
mach - Hipp. gave $\frac{1}{2}$ 30 - 3 gills in
general enough. —

4th To be used hot - Either from the
animal itself or heated.

5thly a little Brand y, cinnamon
or boiling corrects heaviness -

46 If it purges, it must be boiled.

7 The Diet must be light & vegetable.

8 - Exercise ought to be taken. -

Artificial ass milk often used at London - made of snails, eringo, harts-horn & barley - mucilaginous merely, but not like ass. milk. -

apptⁿ of low diet in Disease.

Opinion of the ancients. Common diet pernicious in most diseases, but chiefly in pyrexia. - Appetite is commonly lost, fluids only are desired. - Temis of Flap^r in various degrees.

1st Low in acute, & vice versa

2. More to the old than the young.

3. More to those who had lived fully

4. Given only in the intermission

or remission

41

5 If a patient was disturbed after food he gave a purge.

6 He gave no food ^{during} the operation of purges. This perfect system of Hippo^s was altered by Asclepiades who corrupted it. — Most of the ancients gave no diet till the 6th Asclepiades gave it on the 4th but he gave too much & too great variety. Themison gave food on the 2^d day after the remission, without minding the beg^g of the fever. The strength of the patient is the only criterion. — The beginning of the remission is the most proper time. —

The opinion of the moderns. Pulpy fruit is proper for inflammations. — Typhus requires acids & astringents. — Scariola likewise acids.

47 Catarrh needs mucilaginous & incompressants.
In inflammatory phthisis acid & subacid
fruits are best, but if a purging come on,
Sago & Salap are proper. Animal food not
so proper as Vegetables. Nonfebrile likewise
demand low diet. - Hemoptysis agrees
best with low diet. Icterus requires deob-
struents & bitters. - Lues Sene. agrees best
with milk &c. - Mania requires cera-
sus, melon & milk. - Gent. effect of
veg. food - 1st Of easy digestion, because
less solid - 2^{dly} Juices not very tenacious.
3^{dly} Have little oil. So fluid too & intimately
mixed with the mucus & salts of Vegeta-
bles - & Are very fermentative, which is
a principal part of the digestive process.
5 Stimulates little, but is rather sedative.
Sometimes renews a paroxysm of an a-
gue.

6 It is antiseptic from its salts & ^{fixes} air.

7 Promotes all the excretions & secretions.

8 & 8eq. little increases the red globules of the blood. - Perhaps adds much coagulable Lymph. -

9th Produces mild fluids.

- *Medica Mada* -

Almonds. Came from Africa into Europe. Come from Spain & Italy. The bitter are poisonous to birds & Dogs, but not to man - tho' they hurt him. Carry off freckles from the face. Skin ought always to be removed. - Very nutrimental, but apt to hurt the stomach. - Used in Ischuria, hectic &c. -

Pistachia. comes from Arabia & Egypt. are more oily than Almonds. -

Walnut - when young are not oily, but when old grow yellow & rancid. Skin is

acid.

Nuts - not so oily as the former.
Chesnuts - came from Sardis in lesser
Asia. Heavy till roasted & even after.
Cacao - comes best from Spain - & from
the west Indies - Fruit like a melon
& contains the seeds in the inside, not
unlike Almonds. Much esteemed among
the Indians. Chocolate very nutrimental
& aphrodisiac. In acid & tickling
cough tis very useful. - The Shells
make a kind of tea - between Chocolate
& coffee.

Cream. Produced as well in vacuo as
in air. - Quantity of cream diff. in
diff. species & even in individuals. Old
pastures give most - The milk drawn
last gives most. Antidote ag^t. poisons
to acids.

Light Animal foods. Broths & Jellies⁴⁵
come best from the least bloody parts
& of granivorous animals. Snails,
fish give plenty - & eat more than
beef. Jelly & lymph quite diff^r. Jelly
contains little oil. Jelly an artificial
production by heat - cannot be got from
the blood. Chemical Solution too proba-
ble. - Jelly in proportion to the escape of
air. - Fibres of young animals easiest
of solution &c. - - Bouillie much used
in France in fevers of all kinds. -
Ovom - destined for the chick, but good for
man. - Hipp^s thought them strong food.
Albumen like animal Lymph - easily diges-
ted when soft & v.v. - Used externally
as a repellent - & cellus more like
the red globules of the Blood. - Not so
corruptible as many other animal Sub-
stances - very miscible with water. -

46
Very nutritious & inclines to Venery.
Phys. gave them in fevers but they are
too strong - Two raw Eggs a cure for
Jaundice if there be no stones nor af-
fection of the Liver. - But tis incredi-
ble. Convalescents may be fed in sleep.
Broth used in Clysters both to nourish &
relax. -

Strong Diet - Mushroom - Most of this
tube are poisonous - like the narcotics.
oil is said to be the antidote here too
as elsewhere. - Round headed with red
gills are esculent - Soon become pu-
trid. - Composed mostly of Gluten & incline
to venery & produce choler. - good for weak
Cheese - flowers of the artichoke used to
coagulate milk in Africa - Stomach
used in this country. - Cheese Runnet
does not possess this quality. - and
coagulate both blood & milk, but run

nels & heat affect these fluids differently. Cheese seems to consist of the gluten of Vegetables. - Fresh cheese most stimulant, because the rennet is the salted. Cheese given 2^l a week in the London Hospital even in low diet. - Poor food. good in acid stomachs.

Butter. Likewise vegetable - How separated in churning? doubtful still. By melting & skimming 'tis made to keep longer, but is rendered unfit for many operations. - Much used by the Northern nations strong & heavy food. - Melted it becomes far heavier - Salt-butter more easily digested - Laxative & demulcent. - - Animal food. Various in many things, similar in its effects. - The Greeks & Romans eat asses. Spaniards eat cats, & so forth - The New Zealanders eat their fathers in order to enter them with more honour. Strength & fierceness characterize animal-eaters,

48 weakens the vegetable eaters. —

Animal Solids much more adhesive than Vegetables. — Have much fat. — Veg. either have no fat, or have it mixed with mucilage. Fat of difficult digestion & is almost incapable of change.

Animal food is much more septic than Vegetables. Whew is mistaken when he affirms animal food to give most coagulable matter to the blood. — Affords most blood, predisposes to pleth^{es}ora, scorbut^{ic}. Less perspirable than veg. — Or divides animals into Birds, Animals, fishes & amphibia. —

Birds in general lighter than animals less septic. Hipp^{oc} said they were drier from want of saliva & urine. Piscivorous more pul^{es}cent. Soldier tried to live altogether on Piscivorous & water, but fever & dysentery soon came on. —

Port corrupts very soon & diminishes perspiration - Pigeons applied to the Soles of the feet stimulate like Sinapisms - Their Dung is very alkaline - The size of the animal affects the quality of the food. The small are light & v.v. Exercise very much varies the quality of the animal. While food generally the lightest, but does not agree so well with dyspeptic. Food differs on its effect on perspiration. Young animals are the most tender & are most gelatinous, & less digestible. Castration produces a great difference. Shoulder of Mutton does not keep so well in town as in the country - because they are driven from the country. - - - -
In the W. Indies one day, In Senegal, 4 hours corrupt meat. -

Fish - appear lighter than animals - less firm than Land - animals - are less fat - except a few northern ones as whales, herring, salmon. - 2 causes overbalance
! Their salts & oils are more animalized -

2^{dly} They are more reptile. - Fresh towns have most children & those of higher complexions. Those of the ocean are the lightest because they get most exercise. Eels are heavy. - Amphibious animals are lighter than either of the other 2 species. -

1st Firm adhesion of the fibres is one cause of diff^r digestion.

2^{dly} Much oil or fat.

3^{dly} Viscidity of Juices - Eels oysters &c.

4th Too great a degree of animalization & putrescency. -

There is full diet proper? In no pyæria. a young man in the beg^g of typhus eat animal food & was afflicted with stomacic complaints. - Proper enough in Intermittents along with wine. - Proper too in Dropsies. - In Scrophula also. -

51.
Epilepsy if arising from debility requires ~~light~~ ^{light} food. Light animal food best for Asthma. Veg. improper in hysteria except in the inflammatory kind. Beef steaks agreed best with dyspeptics. Sclerosis requires light animal food. Diabetes demands imperfect animalisation & requires animal food. —

Quantity & time of taking food. The 1st ought to be regulated by 3 circumstances
1st The nature of the food. —

2^{dly} The strength of the digestive organs.

3^{dly} The exercise taken. — Abstinence worse

than Satiety. — The time is — when hungry.
How often ought we to eat? often & little at a time. Dinner ought to be the strongest meal. Supper ought to be light. —

6 Temperaments — phlogistic & antiphlogistic; ^{septic} putrid & acid, Bilious, nervous. —

Phlogistic like the sanguineous of the an

52
antiphlogistic - or phlegmatic is contrary in every respect. - Septic - blood livid, breath fetid, p. weak, sores difficult to heal. - - Acid is the reverse acid excretion prevails, like the antiphlogistic, but there the acidity is wanting. The alkaliescent veg. good here - as onions - horse radish - Salt meat & rotten cheese &c. are here proper. -

Bilious habits agree best with the strongest veg. acids - Nervous habit chiefly found among women & people of delicacy. - Hip. says if he knew the food of any city he would undertake to point out its diseases. - - -
a great proportion of our fluids is composed of water - Drink is as necessary as food. - Potus imbecillius - Water a most universal agent. Eastern monarchs carry the water of the Ganges

53
along with them in all their exheditions & the royal family of Spain are said only to drink of one fountain in Madrid. - Is water compressible? very little if at all. - Oil heated on the surface of water more safely than in any other manner. Contains much air. Water dissolves mineral acids, & unites with alkaline salts strongly. - What are the signs of good water? Colourless, insipid & light; soft, should not become turbid by a solution of silver. -

Rain-water contains many impregnations obtained from the air. Is full of the seeds of the fungi & algae, & Microgiston. - Is better in May than at any other time. - Preferable to fountain water. Snow & ice water not so good.

54 for want of its air - Is not so good a
Solvent - Does not boil greens so well.
Tumidum alpeium guttur is imputed
to these waters. - This swelling attacks
women rather than men - Is sometimes
found here. Found where such water
is not drunk, & v.v. -

Aspect of fountains is of no conse-
quence. Specific gravity of river & lake
water diff. -

Med. effects of water - Hoffman ascribes
all the benefits of mineral water to the
elemental water - But is a mistake.

Mephitic air is found in these wa-
ters where Hoffman could find nothing.

Water promotes digestion - dilutes aci-
mony, corrects putrescency. ~~water~~

Moderately cold tis tonic. Cold water ap-
plied externally with advantage in
Hygmranites. - Proper in passive ho-

morrhages. - Promotes all excretions

& secretions - Baker mentions cures of 55
dropsy cured by water drunk larg-
ly. Antonius Musa cured Augustus by
cold water.

11 - Mercury is a powerful repellent.
Drives away pimples &c.

12 - It is antivenereal. Venereal disease
is either topical or general. Gonorrhoea
is the most freq^t ex^{le} of the 1st. - Bubo while
small is best cured by $\frac{1}{2}$ ointment.

Purgatives, alteratives, baths &c. were
used by regular Physicians to the vene-
real disease but in vain. - Sapsapas & San-
saparilla at first cured the pox, but they
at last failed. 4 or 5 years after the Lues
appeared, mercury came into use. - Sigo
& ~~Mapa~~ ^{Mapa} were the first who used it & they
made great fortunes. Mathiolus 1st and

red - precipitate internally. Paracelsus
 first us Turpeth - mineral internally.
 Dissolved in the juice of Lemons & mixed
 wth Rhubarb. By salivation is the most
 general method of cure. - 3 Stages, Begin-
 ning, continuance & end. - Moderately
 warm weather, venesection, cleaning
 the prima via, that state of the vessels
 which is most permeable, flannel
 shirt, gradual introduction of it must
 be attended to. Salomet is too acid. -
 Plenk's Solution is the safest for in-
 ternal use - Franchot is the safest
 mode of introducing $\frac{1}{2}$. -

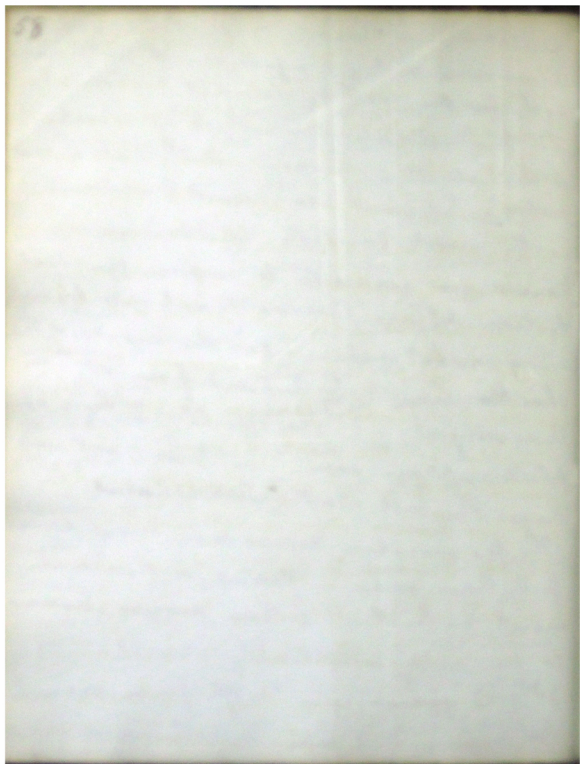
2^d stage. - The quantity salivated - may
 be 4 or 5 lib a day. - The state of the
 pulse must be attended to - it must
 never rise above 100 - The heat of the
 room must not exceed 60 - The patient

must be on one side that the Saliva^l
may run out - The food must be humid
both for the teeth & stomach.

3- The Salivation must go off slowly.
a Laxative is proper - Milk diet is most
proper - External air must be admitted
with great caution. Country, Exercise,
Tonics are requisite to conform the consti-
tution. * Hare proposes to salivate by rub-
bing merc. dulcis upon the inside of the
cheeks lips &c. Conclusions from Expt^s on
this subject. - 1st The effects of & this ap-
plied appear soon - in 3 or 4 or 5 - or 9
days. The last was hydrocephalus.

2^{dly} Its operation seems to be more power-
ful than given in Bolus, or than oint-
ment in friction. Seldom purges, & seems
to be more completely absorbed. —

3^{dly} 3 grains seem suff^t for a man, 2
for a boy - & it may be either given all at
once or not.



59

Coffee. -- strikes black with chalybe-
ates. Roasting destroys its nutrimental
property. -- Infused wth Spt.^s too disagreeable,
not so when inf^d in water. -- 'Tis anti-
reptic - Sedative - owing to the Emphy-
reumatic oil affecting the Nerves. Payer
kept off the asthma by it - Pringle found
it useful too - Thought unfriendly to Venus.
Malt Liquors - Used anciently by all
northern nations. Vinum ex cere. Lat.
Barley is the best grain. -- Thames
water with a 7th less of malt makes
stronger liquor than well water. Mc-
Bride Gibson & Collins have recom-
mended it & experience has confirmed
their recommendations. -- By boiling
it deposits something unknown, by
the loss of which tis improved. --

Ale disposes to sleep by covering the nerves of the Stomach from all irritation. Ale is less fermented & hops than Beer, therefore keeps worse & is always more turbid than it. - Mum is peculiar to Brunswick & is made from wheat wth spices of various kinds & tho' little fermented keeps long.

Wine. - Scarce in Sumas time who employ'd milk in place of it, & it was death for a Roman woman to taste it. Hoffman thinks the salts of wine differ according to their volatility, but Parlar is deposited by all wines. - Rheumish requires 100 years to purify. - Rheumish cur'd Dropsy according to Syden^m. We now use the Parlar of it. - Morbific matter may be removed & no disease follow. At Rome

Ulcus threw⁶¹ out a black matter 2^{dly}
Sweats follow, 3^{dly} after feeling a bit
so one got drunk & had no farther
effect. 4^{thly} It fills people drunk —
& raises heat. — Excites the vis nervosa,
& strengthens the muscles. Andronicus
reproach Alex^m's Drunkenness by telling
him, he drank the blood of the Adder.
Rares & quickens the pulse. The general
ing power is much weaken'd by wine.
The best remedy in Typhus Nervosus. —
Here wine cools & moderates the pulse.
The heart being weak does not empty it
self soon, consequently the motions of
it are frequent. — Wine by strengthen
ing it enables it to act more forcibly
& consequently more slowly. — 2^{dly} Acts
as an antispasmodic. — Useful in
Small-pox, Gout & many other diseases.

62
Shipt mixed 25 parts of water with water
but the wines must have been very
strong. - Celsus recommends 3 hemina
a day. - A young man in small box
took 7 bottles of Claret & 2 of port a day,
without sobriety. - Taste & colour assist
us to judge of wines. Sweet ones are
most nutrimental & have most medica
mentaria. Rhenish contains much
air, acid salt, & spirit. - Sine acida
purgant. - Champagne has little
medica mentaria, Burgundy much as
appears from its growing soft by stand
ing. - Tokay is much heated when
exposed to air. Sudoric & has much
medica mentaria. - Port has many ex
cellent qualities. - Lisbon has
much acid. &c. -
General view of Aliment,

63

What food is fittest for Man? The pythagorean opinion is fit for the simplicity of poetry. In judging of this question we compare man with other animals. — Teeth & Nails diff. in the herbivorous & carnivorous. Stomach too diff. & the length of the Intestines — Man designed for both as experience shows. — Horses, Cows & Hogs can be fed on fish. — Cookery. Esquimaux &c. eat raw meat as was done every where originally. Accidentally falling into the fire dug — suggested the first hint of Cookery. — — Dressed food much lighter than raw, which few think — Hume. Minceluge & gluten in animals & vegetables is the principle of nutrition. — Sugar thought the principle of nutrition not so, except in as far as it contains minceluge.

64 That not the nutrimental part of animals for various reasons. -

The alimentary process. - Hunger induced by a sensation in the stomach. Drink, opium, being drawn backward render the sensation feeble. The nature of the stimulus unknown. Hoffman thinks it arises from some acid remaining from a former meal. - Some probability for it, but tis often not found. Haller & Boerhaave thought it owing to a friction of the villous coats of the stomach, but this is impossible, tho there are not wanting some phenomena to give it a plausible appearance. Is Saliva & the gastric juice the stimulus? - 1st They contain much fixed air ready to break out. Saliva is used as a discutient from this principle.

2^{dly} Spitting removes⁶⁵ hunger. Boerhaave
tried this on himself. Tobacco removes
hunger on this principle.

3^{dly} Saliva grows deficient & hunger
ceases.

4^{thly} When Saliva is scarce as in heat
fevers & sleep, hunger is little felt.

5^{thly} Vice versa

6⁻ Digestion & appetite correspond - Saliva
is efficacious in the 1st why not
in the 2^d?

7^{thly} This cause is suff. to explain the
phenomena. —

Organs of digestion are either coelestive
or nutritive. — Many opinions about
the action of the Stomach. Hipp. thought
it was boiled, Asclepiades that it was
incubated, the Physicians that it was
dissolved - Fermentation was introduced

by Pringle & McBride 661st appearance
is swelling of the Stomach from air
evolved. All the mass is softened & swell-
end. - If it continues too long in the Sto-
mach. vegetables grow acid or putrid. -
Schirous tumours, weakness, & opium
keep the food too long - Haen found the
contents putrid in a schirous pylor-
us. Heat was long thought the prin-
ciple of digestion, & analogy recommended
it. - Heat is requisite but is not the
principal cause. - Cold animals digest
howeverfully. - Induration is insufficient
to explain the phenomena. - Bermy traps
unchanged & worms live well there. -
The stomachs of fish & Dogs suggest the i-
dea of the gastric fluids as strong sol-
vents. - - Solution is not the true cause,
for much of our ~~food~~ food is fluid, & needs not
solution. - -

67
Fermentation is fitted to explain all the like
phenomena. - 2^{dly} Bread, water & meat fer-
ment. - Bread & water grow acid, water
& meat grow putrid, but all the three
ferment. 3^{dly} Saliva increases fermen-
tation - The Indians ferment by chew-
ing - McBride fermented lemon juice
by it - & Pringle fermented vinegar &
wine - 4^{thly} Digⁿ & fermⁿ are exactly
similar - 5^{thly} Heat & agitation favour
both. flannel on the stomach increase
digestion. - 1st This has a peculiar fer-
ment - Saliva. 2^{dly} Its product is
diff^r from every other fermentation. -
1st Dressed food ferments easier than raw
This also digests better - Veg^s & animals
ferment & digest better than either se-
parately - Eggs digest & ferment ell. Ho-
ney also - Asparagus easily - Salt af-
fects both processes - if small in quantity

Objections. 1st Many ⁶⁸ bodies preserve their
qualities after digestion as Garlic &c.
But the fermentation affects only the
mucilage. -

2^{dly} The chyle is sometimes acid, but
this is morbid. -

3^{dly} The gastric juice stops fermenta-
tion - but this is by no means
certain

4^{thly} Herbivorous animals don't digest
animals &c. &c. but this is not
true -

5^{thly} The passions affect digestion,
but cannot influence fermentation -
but they may produce spasms.

6^{thly} Digestion is worst when the
fermentation is strongest - But
this is easily obviated

69
Food stays in the stom^{ch}. 4 or 5 hours, but
the time depends on the nature of the
food. - Further chang^d in the intestines,
call'd intestinal Digestion. No acidity
is perceiv'd even in herbivorous animals
after the bile is mix'd. - The cause of
the sweetness of the chyle is not yet as-
certain'd. - Heat, triture, putrefaction are
all insufficient to produce the effect, a
new fermentation therefore is the most
probable opinion - Bile is very fermen-
table & much air is evolv'd in the Du-
odenum where the bile is pour'd into the
alimentary mass. - Acid fermentation
prevented by the bile - as appears from
Expt^s & observation. - The chyle is taken
up not by mechanical force, but by
capillary attraction. 6 or 7 lib of chyle^d
came from a wound in the thoracick
Duct a day - Mem. Acad. an. 18.

70 Seneca's Wife lost much blood & continued long weak. Red globules very diff from oil, tho' oil is requisite for the formation of them. - Heat is thought requisite & air, tho' fishes & eggs the 2^d day after incubation have them. The process in forming them is like the hybrid process in many particulars. - Why is blood red as it is formed of white chyle? - Some ^{ascorbic &} to salts, some to density, some to air - Haller to a chalybeate mixture in the red globules, but iron is found without this colour. - Some could get no ~~red~~ ^{gluten} from blood. - Salts - Vol. alkali constantly forming, & uniting with the acid of the chyle forms the ammoniacal Salts - Gluten is abundant in the Serum. - Coagula-
ble part seems to be of vegetable origin. - Nutrition of the solids comprehends 1st that

of the fibres. 2^{dly} of the fat. The gluten $\frac{1}{11}$
of vegetables seems to form the fibrous part
of the solids. - Rickety Children have gluten
loose as well as their bones according to
Brownfield. - Nutrition is best performed by
quiet. -

2^{dly} of the fat. - Fat much wasted & soon
restored. - Exactly like vegetable oil. -

- Evacuantes. - Here the alimentary
principles are weak, the medical are
strong. Modes of evacuation are various,
but may be divided into natural &
artificial. Secretions which are of use
& excretions which are thrown out as
useless. - Emetics - Primrose is said
to be a strong stimulant. A little juice
of this, scruffs up is said to have cured
a head-ach. - Asar^{um} produces a dis-
charge without sneezing - Not certain.
Cures head-ach & comatose complaints -
Used in deafness & shew^d in paralysis
of $\frac{1}{4}$ tongue.

367^{1/2} purges & vomits, & is said to have
w^{id} intermittents.

Tobacco was called Nicotiana from
the Gentleman who first brought it
from America. Used by the Indians
to prevent hunger. King J^{as} wrote a
gainst it - a violent sternutatory &
brings on vertigo & even delirium -
Kills if introduced into a wound. -

Produces vomitings if applied to the
skin or to a wound. Cured a tumour
in the hypochondrium. App^d in $\frac{1}{2}$ vca
leplasma for some months. Used to cure
Intermittents - As an aperient too. -

Smoking was introduced by Sir W.
Raleigh - Is supposed to correct infec-
tion. - But every kind of smoke has
similar qualities. Used in clysters on
various occasions, particularly in
drownd people. - The juice is also used.

The Taste is felt in the mouth when 73
clysters are used in cases even of con-
striction - Does this show absorpti-
on on such ^{oc}asions. - Used to destroy
vermin as in the itch. -

Pteromaca or Sneeze wort. The flowers
are said to be stronger than the leaves
gapes much. -

Euphorbium is too violent & ex-
cites convulsions. All acid plants
may be used, as onions, garlic &c.
of the nature of the mucus discharg'd.
Found in the nose, Lungs, aspera an-
teria &c. perhaps in the blood also -
Found in cheese. - Mixes ill with wa-
ter. Lighter than water, but after
stagnating or fermenting it sinks in
water. - Mucus is converted into pus
by heat & stagnation. Coagulates in
boiling water. -

74 Is not so putrescible as the Lymph.
Hence the mucous habit is less liable to putrid diseases than others.
What is the origin of Mucus? Is it the offspring of putrefaction? Sennae thought so, but his remarks only prove that it is not putrescent. - Animal mucus diff. from veg. mucilage. - Mucus the origin of many diseases. - All errhines are acid. Some possess it in their essential salts some in their oils. - Willis thought the fluids of the nose proceeded from the brain - thro' the cribiforme. - Errhines quicken the circulation in the nose. - Warm milk applied to the nose stops sneezing. - Effects - When a coryza stops a cough begins which did not appear while the discharge continued. -

75

Enthines useful in diseases of the eyes
& of the Teeth. Used in rheumatic pains,
deafness, head-ach &c. - Useful in roso
rose cases & hydrocephalus - Irritate
the nerves & relieve nervous head-ach.
Promote delivery, menses - relieve
hiccups &c. - Must not be used in hot
countries or warm weather. -

Benzoin. - called *apa dulcis*. - Dy-
solves in Sp. Is composed of Salts & Resin.
Not used internally, but it may be sup-
posed to attenuate - a good Cosmetic - R
Tinct Benz Zii - Aq Ros opt libi ~~at~~
ulere secundum artem si vis uenerem
ipsam aquare. Dr. Home's Lac Virginis.
Dr D. Morrison proved the salt to be an acid
in generis for he compound it wth
bothe the alkalis & formed a neutral
Compound. - Is found wth opium in

76 Elixⁿ Pareg. to prevent the opium from
binding too much. —

G. Ammoniac. Pliny knew it and men-
tions its qualities. — Comes from Africa
near the temple of Ammon. The tree
is of the umbelliferous kind. — Composed
of much resin & some gum. — The dose
is abt. 20 gr. — Is used in pillula scill.^a.
May be given in water or vinegar. At-
tenuates powerfully. A good pectoral
used in France. Bad in inflammations
because it heats; & stimulates too much
for ulcerations. — Employ'd externally
to tumours. — — all the tribe of attenu-
ating pectorants contain an acrimonious
principle. Squills are the best of all
the attenuating pectorals, as they eva-
cuate mucus not only from the

Lungs, but from the intestines ⁷⁷ ~~intestines~~

Incrassantia. In the *Catarthus tenuis* there is a thin mucus, for which the preceding pectorants would be improper.

Tupulago - Leaves & flowers, the 1st best. Good in coughs with pyrexia, the 1st stages of heetic & in colliquative diarrhoea. It must not be too much boiled otherwise the decoction becomes better.

It seems to be anodyne as well as demulcent. - The leaves of this plant prevent the excoriation of the anus from

Scarborough water. - Used in vapour inhaled into the Lungs. -

asthma from Astoria healing. Used much by the ancients & by Boerhaave. The root & leaves are used,

but the 1st not so much. - Both water & Sp^t. extract much mucilage. - Dose in powder is ℥i -

78 It is a good demulcent, emollient.
incrasant &c. — In decoction $\frac{z}{i}$
to libl of water is a proper quantity
a good antispasmodic. — 'Tis much
us'd in Clysters — in Syrups & oint-
ment.

Fufuba - a sort of plumb growing
in France & Italy - supposed to be
poisonous before they are ripe - the
food of the countries where they grow.
Linum - very mucilaginous ^{most} of all.

$\frac{z}{i}$ in libll of water makes a very
mucilaginous ~~mix~~ ^{decoct} infusion. Sep
in decoction. Excellent in clysters.
good for fomentations externally. —
Gum originally thin - thickens by ex-
posure to air - similar to mucilage
in almost every thing. Gums dissolve
in water, because as tis said, they have
much acid united to oil - but Tra-
gacanth tho' it has more acid than

79
G. arabic, dissolves more difficultly
than it.

G. Arab imported from Turkey. - Senegal
similar to it. - Tree like Plum
The natives live on it for many
weeks & thrive perfectly well. -
Is very nutrimental. - The Larva from
Arabia was det and 2 moths longer
than usual - The ate their Larva of G.
arabic & were very healthy. Does not
hurt the stomach, therefore an excellent
incrasant in pyrexia. Used in acute
rheumatism - with success by Glome.
Foragacanth. Got from a shrub common
on Ida in Crete & at Aleppo - Gets
the shape of small worms from the man-
ner in which it is protruded - Dissolves
in water with more difficulty than
other gums - Used chiefly in troches &
powders. - Distilled it gives more
acid & less oil than G. A.

89 off. to powder except the most an
be heated. -
olibanum - The tree & situation un-
known - It is bitter & inflammable -
hence used for incense. Not volatile. -
Dioscorides says it produced madness
unt this is not found. - Useful in
fluor albus - recommended in pleu-
risy. - The vapour is used in prolaps
sus ani. -

olea expressa - come chiefly from the
unctuous seeds. - The oil of mustard is as
mild as that of almonds. - Except the
bodies be rancid or volatile. -
Olive oil made chiefly in France
& Spain - corrupted by fermenting olives
give a worse oil. - Virgin oil the
best - Oils are heavy - 2^{dly} They are
laxative - used for the meconium -
in cases of hardened faeces - after dysen-
tery to bring off the scybala - in

81
Tenesonius - 3^dly used as a pectoral -
either with 4. Ar. or with the vol.
alk.ⁱ - 4thly as an Emollient - and
after the bath along with friction. -
recommended in Dropsy, but ineffi-
cacious - except as it enables the
skin to endure friction -

Palm-oil - Got from the coast of Gui-
nea & the Cape de verd Islands & is
used by the natives as butter

Sperma-ceti - Some think it a natu-
ral bitumen - but wants the acid -
said to be the genetal Liquor of the
Cete dentata - but wrong. Supposed
next the brain of that fish - but impos-
sible. - 1768 a fish of this kind was
cast ashore at Leith, & the sperma ce-
ti was found in a cavity of the ^{head.} brain
anterior to the brain. - Was about

82 The consistence of starch - It is purified by letting it drop, passing thro' a cloth, & being put in caustic Lye to destroy the corrupted parts. - all the fat is of the same kind as the spermatic - Dissolves in water only by the help of intermedia. - Zfp is a dose - ought to be dissolved by q. arabic. - Less employed now than formerly. - -

Catarrhus tenuis arises from anæmomy as well as tenuity. - 1st Because it arises from suppressed discharges, & from acid miasmata - 2^{dy} The symptoms show this. sneezing, running from the nose in *Catarrh*, measles &c. - 3^{dy} The remedies which diminish irritation & correct acidity elsewhere are proper here. 4^{thly} opium is a principal ingredient

by tugging the nerves of a part. 83
In concerting aerimony they act 1st on
the acid matter in the throat, trachea
&c. - But they never can enter the trachea
where the chief irritation is. The motion
of the jaws may relieve a cough of itself.
2^{dly} They will enter the vascular sys-
tem & diminish aerimony there. -
3^{dly} They operate chiefly after absorption
by entering viz the mucus of the Lungs.
Bound to the acid secretion, they will
cover it - by softening & covering the mucus
of the Lungs. - Loadjitors - Motion of the
Laws. - Tablets, stones & peas - Emollient
ointment rubbed on the breast will re-
lieve & perhaps may be absorbed. - Vapours
inhal'd - Mudge's inhaler had one fault -
The expired air was again inspired, but
Murray by 2 valves corrected this. -
Opium is an excellent incrapant by
diminishing irritation - G. Arabic
also. - Incrapant
Det.

84 Lago, Salap, &c.

Salagoga. — Salwa is found in all
but in fish tis found in the stomach.
The Castor because he feeds on hard
wood has most of it. — We recede about
a pound a day. — Evaporates easily. —
very viscid — hence promotes the mix-
ture of resins & water — full of air —
& swells in the receiver of the air-
pump. Is it septic? In salivation tis
so, but not otherwise. — Is much allaid
by diseases & medicines. — Of 20 $\frac{3}{4}$ 19 were
acidulous water. — The residuum was
a kind of selenites — Marshatories, the
imagination, mercury, masmata as
in Sarcola — Scurvy & increase it.
Eruea is acid but grows mild on
drying. g^o xv have been given internal-
ly as a stimulant — & in the

paralytic lingua. —

Imperatoria — Zps has been given in palsy.

Nigella — Zps is said to promote milk
& to cure rabies canina. —

How do the external sialagogues act?

Is it by oscillatory motions? — Expli-
cable only on the supposition of the
centrifugal principle driving the fluids
towards the heart for the good of the sys-
tem. — They stimulate the part. — They
empty the neighbouring vessels —

Mercury is the only internal sialagogue.

Regarded as a poison at first from its
effects on Miners. Arabians first em-
ployed it externally in herpes & vermin.
Used sparingly till the end of the 15th Century
for the venereal disease. In 1518 tis men-
tioned as a remedy. — Paracelsus or Math.

thus first used the various ^{prepa} operations —

It is found in an argillaceous Clay —
whence tis pressed & called unguen —

86 It is found in hard stones - but chiefly in the form of native Linaraban. Where there is little sulphur the distillation is performed per se, but in other cases, Lime, alkalines, or iron are employ'd. —

Mercury - Linn's method —

4 If the Saliva is not swallowed no diarrhoea follows

5 Is it absorbed by the Lymphatics of the mouth only? by there chiefly. Salivation is produced when no $\frac{1}{2}$ is swallowed. —

Salivation is more strongly produced by this than any other method. This recommends it in hydrophobia - not in Lues. — Sometimes a salivation cannot be produced - Is it owing to a callous or p^{ar}alytic state of

87
the vessels - It answers equally well
in topical & general Uses. -

Calomel enters the system directly, for
no purging follows the swallowing of the
saliva. - May it be mitigated by the mu-
lage of the liquors of the mouth? - There
is a kind of temporary salivation. Calo-
mel mix'd with honey by Glare - but this
seems unnecessary - & may increase the
chance of going to the Stomach. -

The antivenereal power of Calomel given
in Bolus is not very strong - Here, it pur-
ges much. - More agreeable than ^{filthy} greasy
paction, disagreeable deglutition, &c.
& is safer than internal applications

Salivation modures 9 dangers & 99
inconveniences & 999 disadvantages;
therefore attempts were made to cure
the disease w^out salivation. -

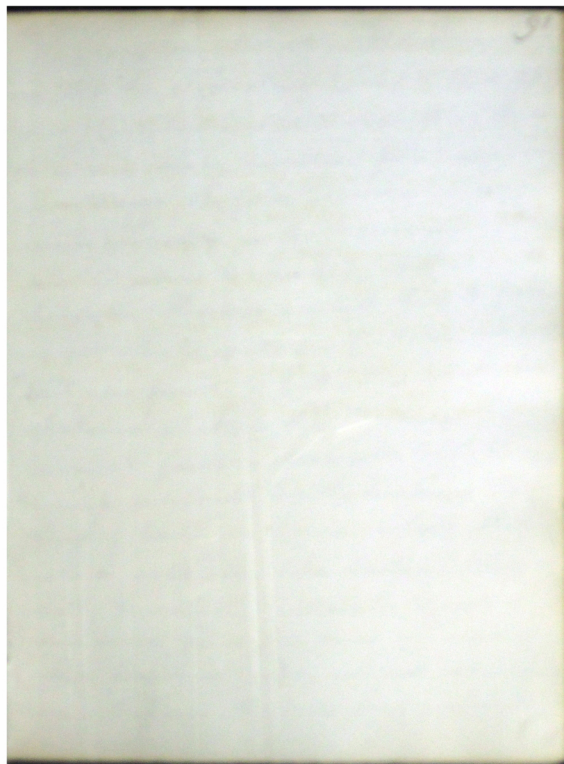
Salmanazar first introduced this custom - others, especially in France have imitated this practice. Which preparation is the most proper? - Results from Egypt to cure the venereal disease without salivation.

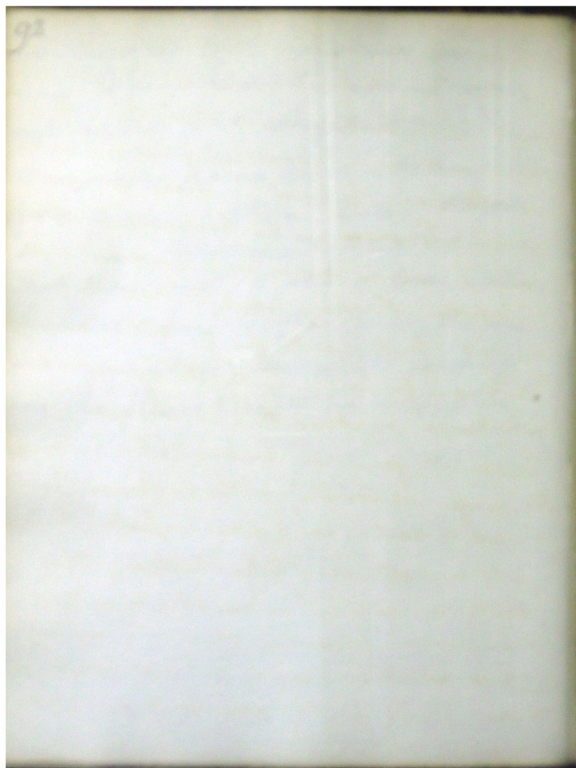
External friction used by the French - They bleed, purge, & use the hot bath long - then they rub in $\frac{1}{2}$ of strong ointment for some time, then they conclude as they began. This is the Montpellier method, but is very improper. - Sublimate dissolved in Sp^t is improper - because the Sp^t does not dissolve it well - heats the patient &c. But the sublimate is too nauseating, too acid &c. often fails entirely - The acid renders it too acid

to suffer a proper quantity of Z to enter.
Turbith Mineral was tried in the cli-
nical ward - $\frac{1}{4}$ of a grain the begin-
ning - 2 grains were given - but it
did not cure ulcers. - Mercurius pro-
cipitatus uid in 2 or 3 gr. a day - is an
excellent remedy. - 3 or 4 gr. of Sulph.
Antim. prevents it from vomiting & purg-
ing - An opiate is sometimes requisite.
The cinereus is preferable to the troch.
her re. in every respect. -

How do mercurials operate? Is it by eva-
cuating? No; for other evacuat^{ns} do not
cure the disease; the symptoms disappear
before evacuation begins; mercurials do
not cure in proportion to their evacuating
power; & applied topically, destroys the vi-
rus without producing evacuation. -

~~Menagogue~~ Menagogues. Is it venomous, acrimo-
nious or pure blood? It is not venomous,
but neither is it altogether sound. It is
acrimonious in some degree. — Do they arise
from general plethora? Galen thought
so — & many things seem to move it. —
But there must be also a local plethora.
Swelling is found in the Uterus; the mam-
mæ sympathize; leeches & cupping com-
pressing the Thighs promote the evacuation.





93

How long does the aliment take in passing thro' the alimentary Canal? 24 or 30 hours. Chalybeate waters show this. But there are many varieties from many circumstances. The fecor is strong in carnivorous & ^{less} stronger in the herbivorous. - The fecor is owing to an acid combined with phlogiston. Hornberg analysed them to find an oil which could fix $\frac{1}{2}$. Water, oil, earth & salt was found. - Cathartics comprehend whatever quickens this discharge. -

Tamarinds found in Arabia & the E. Indies & were introduced by the Arabians. 'Tis green if boiled in Copper vessels. They yield a salt very like Tartar. - They are gently purgative, antiseptic & cooling. - Zimmerman commended them in dysentery. - Cassia found in Egypt, but not indigenous there. - Pulp is the only part employed. -

94 *Hermodyctylus* used as a laxative by the
Arabians, & by the Egyptian women to make
them fat as fatness is reckoned the chief
beauty there.

Manna diff^t from that of the Israelites.
Gathered from a prickly tree upon Mount
Saurus, & is named from the part of the
tree to wh. it adheres. Two monks 1545
affirmed it to be an exudation & was made
by Donatus. A cloth put over the tree
contained manna in the inside of it; open-
ing the tree, little bladders are found
containing a juice wh. can be condensed
into Manna; burning wood of the ash-
gives it out at the other end. &c.

It purges gently & irritates little.
acid purges & Manna better in the dysen-
tery than the neutral Salts which are
reptic, & than Rhubarb which binds af-
terwards.

95
a cone is sometimes found in the heart of
the Elephant, the stag, the ox & the old man.
It is commonly plac'd about the origin of
the Aorta, but ought to be reckon'd mor-
bid in every instance - It is wanting in
youth & not uniformly present in age.
The fibres of the heart (the human) are
not in straight lines: - but inextinguishably
convoluted -

The nerves of the heart arise chiefly
from 3 sources, viz, the highest, middle & low-
est cerebral ganglion -

Why does diastole follow systole of the
heart? Some have fancied that there
were fibres appropriated to each action -
that the external fibres produced relaxa-
tion, the internal, contraction - But this is
an idle fiction - 1st The fibres of the

96 heart are so connected that one cannot act without the other - 2^dly When you irritate the external fibres of the heart so that action ensues, the heart contracts, and does not relax. - Diastole is produced merely by the heart's ceasing to contract.

The part of the heart which retains its irritability longest is the right auricle & that portion of it which is next the *lawa* particularly. -

The force of the heart is astonishing. It elevates considerable weights on the breast; it beats 5000 times in a minute; it continues unremittingly night & day; & never gives the slightest sign of fatigue. -

It begins first to move in a foetus; is larger than any other part; it is first excited into action after submersion; &

is largest in the most vigorous Ani⁹⁷
mals - The Ancients were wrong in giving
the largest hearts to limorous Animals -
The heart of a male exceeds that of a fe-
male as 6 to 5 - or 16 to 14 - - The heart of
fishes is less than that of birds, altho'
the Whale tribes have it large -

But Fœtuses have been found without
a heart - & after disease has destroyed the
greatest part of it, by ossification, gan-
grene or abscess, life has continued -
Besides in animals of cold blood, life & mo-
tion continue after the heart is torn out
or the great Vessels cut - The Tortoise lives
2 days after losing the heart, & after the
motion of the heart has ceased, it can
be perceived in the Tail of some Fishes -
Besides, many have denied that the
force of the heart was equal to this task.

98 The contraction of the Arteries has been brought in and to the heart -

The oscillation of the small vessels by Whitt & others - This from the small-ness of the vessels cannot be seen - But will not oscillation propel as easily as promote the motion of the blood? No. because the heart & great arteries are behind & propel.

Hutchinson attributed the motion of the heart to air rarefied by heat - The effect of cold in repressing motion is sufficiently known - The heart torn from a fat, beating vigorously was suddenly still by a cold affusion -

Bertholm talks of the air being confined & rarefied as it were in a glass-tube. He illustrates it by the egg after incubation, where the air certainly produces

come effect in the circulation of the 99
mours.

Answers - The motion of a Fetus with-
out a heart may proceed from the Mo-
ther. A small part of the heart remain-
ing may discharge the office of the rest so
as to Preserve Life. - The oscillation
of the blood, after the heart is at rest, on-
ly shows attraction -

effect of the animals be very languid, the
motion of the heart on the small arteries
will not be perceived - otherwise it will -
Besides how can it reach the small
veins but thro' the Arteries? Yet Lwen-
hoeck says he saw it in the Veins -

Whytt's principles are refuted by plain
observation & Expt. The Globules must be
moved by a force exceeding the third part
of their own weight, for they move with

100 great velocity thro' the small vessels by the sole power of the heart - The force of the heart must exceed 2 lib - (No w^t he limits it) for a weight = 51 lib hung on the leg or laid on the breast is raised by it.

The arteries are indeed contractile but their effect on the circulation is much inferior to that of the heart -

1st In syncope the heart alone renews life, while the arterial system is suspended -

2^{dly} In cold blooded animals contractility is very small - & in old men ossification is frequent -

Attraction of the vessels is inadmissible, because Capillaries while full

joint attract. Besides attraction comes ¹⁰¹
ponds to the quantity of matter, where
for the small arteries, which are thicker
er than the Veins ought to prevent the
blood from flowing into these, & the l^l
le Veins should keep it from ascend
ing into the large ones. -

Oscillation never takes place except
where the force of the heart has been
diminished - It is ambiguous, tending e
qually to promote & retard circulation. -

If oscillation did take place it could
not escape the view. -

Besides the vessels do not contract
or oscillate on the application of a strong
stimulus - as air, water, alcohol & chemical
poisons, how then should they do it from
blood.

Inflammation does not favour the opi
nion.

102^d If contraction of arteries be the cause of circulation, the more vigorous the contraction, the more rapid ought to be the circulation - Consequently the vessels of an inflamed part ought to be empty & pale, but they are turgid & red. -

The peristaltic motion of the intestines is quite inapplicable to the arterial oscillation.

The Theory of heat is contrary to fact. In syncope, Heat does not come first & motion afterwards, but the reverse.

2^{dly} The air is sometimes, indeed generally so cold that it takes away heat from the blood.

3^{dly} Heat would retard as well as promote the motion of the blood. It is a blind cause & acts equally in every direction.

The heart is the chief mover in this ¹⁰³ ~~line~~
- since - Its pulsation is synchronous with
that of the Arteries both high & low - Is this
certain? Cannot one distinguish an inter-
val between the motion of the heart & of
the crural artery? Haller Harvey &c. say
no; Jos. Wedbrecht says he distinguished an
interval between the artery of the wrist &
the head - Monro says nearly the same
thing. -

The force of the heart has been
very differently assigned - Borelli has
made it 180,000 lib - Keil has reduced it
to a few $\frac{z}{3}$. The opinions & manner of forming
them are too various to be abridged. -

It is difficult to form a very certain con-
~~ception~~ ^{ception} here, because we are incapable of as-
certaining, either the time or velocity, without
wh. no calculation can be made. -

The resistance too is so great as to affect the calculation very considerably. - The arteries are at every stroke dilated, sometimes broken. The Veins also; the breast is raised (more however by the organs of respiration, than by the heart) even the weights be laid on it. - Friction, varying diameter of vessels, viscosity of fluids & many other causes of friction must be considered in order to form an adequate idea of the force of the heart. -

From the texture of the heart, its contractions lift the point towards the base.

As it is a muscle, its ~~inf~~ ^{irrefragably} has been derived from the Nerves running into it - Much has been attributed to the 8th pair - & many Expts made.

Boerhaave tied up the par vagum with oyl even preventing the creature from running. - Willis made a similar Expt. The Dog

lost his voice, was convulsed & died in a few ¹⁰⁵ days, never having taken food after the oper.ⁿ. -
Lower's Dog ~~lost his voice~~ ^{after palpitation & panting} died in
one or 2 days. - Boyle found the pulse in
termit, but the creature survived four days -
Morgagni had one that survived the Exp.ⁿ.
10, another, 18 days. - In other cases, sick-
ness & fainting have ushered in death sud-
denly - Irritations of the 8th par vagum pro-
duce no effect on the heart. When the inter-
costals (from wh^{ch} the heart receives more
numerous branches) ~~are~~ ^{are} tied, the animal
died in 24 or 30 hours - Both the intercostal &
sympathetic being cut, the animal dies, not
so soon however as it would do, if the whole
sensibility of the heart were owing to
them. - Indeed nerves may still proceed
to the heart, from the cervical Ganglion,
which is formed partly from the intercostals,

106 but chiefly from the 6th 7th & 8th of the neck, & the 1st & 2^d of the back. - These Nerves can never be divided without wounding the Blood-vessels. -

The cutting of the spinal Marrow quickly kills Animals - at least so 'tis said - In this way the Brazilians kill wild oxen. Yet Haller divided that of a Dog without producing death ^{for hours,} & a peasant, whose 1st vertebra slipped from the 2^d by a fall, lived some hours without inconvenience. - Irritation of the medulla does nothing to restore life, & the heart moves even after the head is cut off. - The heart therefore has innate irritability. In cold-blooded animals this continues long after the other parts are at eternal rest & in the warm - it is the most irritable except perhaps the Intestines - But in the

Feelus the heart is first irritable. - 107

Now all the other muscles receive more numerous & large nerves than the heart, wherefore they ought to be more irritable, if that depended solely on the quantity or number of Nerves. -

Innumerable substances irritate the heart. Cold, & heat - The last may be properly employ'd on a thick. - Electricity.

Mechanical or Chemical stimuli too.

Air is one of the most powerful stimuli - whether thrown in by the Veins or by the Tracheal Duct. - A Bubble air thrown into the auricle of a frog, & entangled in the vessel blood, excited the heart to contraction, for 10 hours, & in a Dog for 7. - It has excited the heart 12 hours, or several days after death.

The heart is by much the most irritable in young Animals. -

108 No show that the heart is unstable independent of Nerves Haller says

1st That it can be excited into action after the nervous influence has vanished from every part. - In a Serpent the heart can be excited to motion 4 days after death.

2^{dly} The heart continues moveable even after tis torn out of the body. Cold-blooded Animals are fittest for this Experiment, & fishes have often exhibited motion 30 hours after death. - A Tractor mentioned by Lord Bacon had his heart torn out - It leaped up 'rescurrem' at first, then diminished gradually, but continued moveable for 8 minutes -

3^{dly} Even a little of the heart is moveable tho dissected from the rest - The Gal, Torpedo &c all show examples of this.

4thly - Animals without brain or 109
nerves have regular motion of the
heart. -

Why then does the heart enjoy perennial
motion? Is it because there is a fiery
spark which makes the blood froth over
as the Ancients spoke? No, for this is im-
possible. Sydenham imputes the motion to a
mixture of the acid pancreatic liquor with
the blood in the heart, but this is false
in every point -

Willis produced a more subtle theory. -
He divided the nerves into 2 Clases; viz Those
that went to voluntary muscles which need
alternate rest, & those which go to the in-
voluntary - The former he deduces from the
cerebrum, the latter from the Cerebellum.
Injuries of the Cerebellum prove fatal much
more suddenly & uniformly than those of

110 Lancisius ascribes it to the want of Ganglions. The nerves which go to voluntary muscles have them, & by their means the motions of their fluid are subjected to the will & vice versa. Directly opposite is the assertion of Lieutaud, as well as his reasoning. Ganglions he says are placed in the Petal nerves, that they may break the power of the will -

Objections - This ~~cause~~ ^{statement} of Willis is contradicted by all anatomy. Many animals have no distinction between the Cerebrum & Cerebellum, others have not this last part, yet their heart moves perpetually - Fishes & insects - Birds & Quadrupeds -

2 - There is no peculiarity in the Cerebellum wh. should give it's nerves a preference. It has less cortical matter & is softer. ^{all} That's

3^{dly} Wounds of it are by no means so ^{all} dangerous as is represented - An African who had it so wounded that he lost some of it, recovered in 20 days - Schirrus & ulcer have continued long without producing death - Even removing the fore bellum either in the foetus or adult, does not instantly destroy the motion of the heart.

4 Many of the nerves of the heart ^{come} from the cerebrum, & many nerves from the cerebellum go to voluntary muscles.

As to ganglions, that matter is extremely fanciful. The nerves of the leg, thigh, & arm not to mention the pharynx &c have them.

Swammerdam, Pitcairn & Friend, impute the perennial motion to the want of Antagonist Muscles. But the heart has weights opposit to it - so have the intercostals & the

112
fibres of the Intestines have actually antago-
nists. On the contrary, the erector penis ob-
eys sense (but tis by no means a vo-
luntary muscle) has no antagonist.

De Gorter supposes that muscular relaxa-
tion is owing to the compression of those
nerves on w^h the energy of Muscles entirely
depends. But then the action of every mus-
cle ought to be alternate. -

Stahl's opinion was that an intelligent
principle regulated every motion, & that
the movement of the heart tho from neces-
sity continual was as much voluntary
as the accidental motion of the hand - Col-
nel Townshend could stop his pulse &
respiration. -

But the mechanical sect make many

113
replies to this reasoning. The mind is ^{not} conscious of any power over the heart, nor can it by any effort, controul its motions. But the Mind is as little conscious of any power over the eye-lids, the unquestionably it does possess such a power - Whijt ascribes to the ruling principle, not understanding & consciousness, but merely a sense of inconvenience. In this only he differs from Haller. -

The heart is evidently much affected by mechanical stimuli. Besides Hall's metaphysical cause does not explain why the motion of the heart should continue uninterrupted. -

A voluntary muscle never passes into a spontaneous one (what then is Chorea, spasm &c.) & vice versa. But the intercostals seem an exception to this. Do not say

114 That the repulsion of exertion destroys the
Dominion of the will - For this remains unim-
paired over the Eyes lids, tho' they close 10,000,000
times every day. Nay Gladiators can even
prevent them from shutting tho' a stroke
be inflicted.

The animal motions are indeed often
interrupted for days or weeks; thus the
intestines excrete nothing for a long time;
every symptom of life has vanished for
24 hours; Marcellus for 2 days; even for
10; & Empedocles celebrates a woman who
lay for 30 days without any sign of life.
In other cases, putridity has begun in
the extremities - (which stores the Analogy
of Chrysalides renders somewhat credible)
In all these; & in many still more mod-
est, the motion of the heart was re-
stored

without any consciousness or exertion of the Soul. 2

The heart is certainly not the seat of the soul, for every power of it can be exercised tho' the heart be torn out - a Spanish Soldier in this situation spoke, & Bacon's Malefactor prayd - The head of a Thorpica (what's that?) swallow'd it's own stomach sever'd from the body - a frog runs leaps &c. after the heart is cut out - Similar Expts. have been made ^{on} other animals & Galen mentions victims crying after losing their hearts - Now when the brain is destroy'd, every thing ceases except indeed the motion of the heart, which is carried on in fœtus's without heads & continues in many insects & animals after the head has been cut off.

Whytt says that the Soul is divisi-

116 -ble, so that part of it may continue to animate a limb severed from the body, but this is gratis dictum - A man feels no part of his Soul cut off wth this Limb. -

To account for the heart's mobility, Haller says it is more movable than the other muscles - Whence? Some say, from its coiled structure, others from its branching fibres, others from a peculiarity in its nerves -

These are not more numerous than elsewhere - They are softer, that is they have less cellular membrane which gives hardness, but that is merely because they don't need it on account of their deep situation - The outside, like that of the intestines is little movable, the inside very much so - Is this owing to the ne

being so spread out as to be exposed 117
constantly to the blood?

The Stimulus is the blood - which tho' colourless in a young Chick produces the effect - Air does the same - But the heart beats tho' empty. The pulsations however become weaker & weaker in proportion to the loss of blood & the remaining attempt to move proceeds from the small quantity remaining -

The right side of the heart commonly retains motion longer than the left - To show that this was owing to the blood alone Haller made the following Expt. - He tied up the vena (ava), & opened the pulmonary artery - He left the pulmonary veins open, & tied up the Aorta; in this way the right side of the heart was emptied while the left continued full.

118. In such cases the left auricle & ventricle uniformly retained their motion longer than the right by 4 hours - The right Auricle contracted immediately - the right Ventricle, acted languidly & held a spoon as it was thoroughly emptied. All these things show that blood is the proper stimulus from whence the motions of the heart proceed.

Why is the right auricle more irascible than any other part of the heart? - Because the blood flows into it from the veins, & excite it to contract - Its contractions push the blood into the right Ventricle which also contracts, but not so easily nor frequently - The left side of the heart receives it's blood from the Lungs which cease to act before the heart, & as without their action no blood can be propelled into the left side, that part is

sooner deprived of its natural stimulus - *Thine totum*. - Sometimes pressure on the breast by forcing the venous blood into the Auricle, recalls Life - In this way Desalins regenerated a noble Patient whom he tried to open too soon & being sent to Jerusalem died an Exile at Zaazur this. -

Why is there an alternate relaxation & contraction? Bellini says that when the ventricles are full they compress the Nerves of the Auricles, whence there are relaxed, & as the one cavity is an antagonist to the other, this happens incessantly. -

Reussens combined the fullness or emptiness of the coronary Arteries.

Perrault supposed two orders of fibres, one of which alternately overcame the other. Borrowe Langrish adopted it.

Theorem believes that the valves of the Aorta are so placed as to be shut by the blood expelled from the left Ventricle, and that the coronary arteries receive their blood not from the contraction of the heart, but from the subsiding of the Aorta. The spirits are antagonists to the blood, & the fibres of the heart are extended by the blood going into the coronary Arteries, & are relaxed so that the blood forms the diastole. The heart now left to itself is excited into contraction by the spirits, & drives the blood into the aorta while the mouths of the Coronarys are shut by Valves. The coronary Valves being again relaxed, the same events happen again in course.

Moschellius believed that there was ¹²¹
an opposition between the heart & Dura
Mater. The contraction of the heart drives
blood into the Dura Mater, over comes
it's resistance & forces it to be relax'd,
which relaxation cuts off the supply of
Spirits from the heart & forces it to re-
lax in it's turn. Elated with victory
the Dura mater unwarily contracts &
furnishes anew spirits to it's Antago-
nist - Sic in æternum. —

Boerhaave with much ingenuity rea-
son'd thus. — When the heart distends the
Aorta with blood, the Nerves which run
there are compress'd & their influence in-
tercepted so that relaxation takes place.
Besides the mouth of the Coronaries is
shut — another reason for relaxation. —

122 Leutaud thinks that distension of the cavities produces compression of the fibres of the heart - hence pain, & contraction! -

Nachelin explains it on electrical principles. - The heart is non electric, & being electrified by the nervous fluid it contracts, comes into contact with the blood, which is likewise not electric, & so discharges its electricity. -

Alternate action & relaxation is the law of every muscle - Bellini's theory of compression is contrary to fact.

The blood has very little effect on muscular action. Ligatures on the Carotids don't affect the muscles of the face; halcy does not follow cutting the brachial artery, nor does a frog lose its muscular power on losing its heart. -

123

The Valves of the coronary arteries are ^{per-}for-
tious; the blood flows into them during
the contraction of the heart, & tho' they be cut
out, the motions of the heart continued.

The Dura mater is insensible & immo-
bile.

The ~~or~~ Nerves of the heart do indeed ly
between the great Vessels, but so as to
admit very little pressure - Besides there
are many others - unconnected with the
great Vessels - (which serve both for sense &
motion) - Pressure such as is required would
be painful - & even cutting the Nerves does
not produce the effect.

124 Haller Tome II. Quantity of blood. -

The most simple way seems to be, to empty the vessels, weigh the blood & compare it with the weight of the Animal - Thus in a sheep it has been stated as the 23^d. In a Lamb about the 20th. In a goose the 30th. Moulins therefore estimates the blood at a 20th part of an Animal's weight, which gives about 8 lib to an Adult.

But these Expts are by no means decisive; the result is variously stated by others; Daclin-court obtained a 10th part of an Animals weight, Moor & Hawey a 12th & 11th - Besides, much blood remains in the small Vessels & larger Veins after an Animal has been bled to death - May much remains even in the Arteries, for it rises in them to 2 feet & 5 or even 10 ounces immediately before death.

Other Authors have tried to resolve the ¹²⁵ question by considering the quantity of blood lost in hemorrhagies, which is immense - By vomiting, 30 lib have been rejected at once, & in the same paroxysm, 202 lib. -

A hysterical woman was bled 1020 times, in 19 years & was at last cured by blood bursting out from her womb. - A girl of Pisa lost every month 125 $\frac{1}{2}$, & was bled every day, or every other day. - The blood of a man may therefore be estimated at 27 or 28 lib, which is to his weight as 1 to 5.

The lean have more blood than the fat; the fierce than the tame; the young than the old; the warm than the cold blooded.

Suppose the Diameter of the Arteries 2 & that of the Veins 3, the former will contain 3 parts, the latter 9. -

126 The Ancients believed that the Arteries carried air, & the Veins, blood. This is refuted by the Circulation; however tis still believed that there is a difference in colour &c. between the venous & arterial blood at least in the ^{warm} ~~cold~~ Animals. The heat of the arterial is that of the venous has been stated by several as 97- to 94; 100 to 95; 99 to 97. Hammerschmidt makes the art. blood lighter than the venous as 1404 to 1414. Helvetius on the contrary makes it heavier in the proportion of 28 to 14.- The results have been so opposite, that we must suppose the thing subject to variation.- The heat & colour are also subject to variety. The art. is generally reckoned warmer & more florid.- But blood drawn from an Artery varies as it flows. The same thing in a vein & in different Veins

Martine could discover no difference in ¹²⁷
the heat, & substances produce similar
changes on the arterial & venous blood by
mixture.

Various diseases & poisons change the
colour of the blood. Hukland mentions a
man whose blood was quite thin & colour-
less from extreme famine. -

A white substance has been some
times found on the blood, possessing every
property of milk. 3 parts of the whole have
been found milk. .

Blood coagulates spontaneously both
in heat & cold, more readily in the latter.
Strong men, men subject to inflammation,
gout &c. have the firmest coagulum - It
sometimes takes place even in the living
body & forms that disease in horses w.^h
is called la gourme. -

Many refer polypii to Coagula of blood formed after death. But

1st The appearances are different. A polypus has a granulus for a Centre, round w^h a white Lymph is formed into a kind of elastic flesh. New Laminae ^{of Lymph} are added in progress of time
2^{dly} They stretch their roots from either cavity of the heart (& they possess each naturally) to the neighbouring veins & Arteries.

3^{dly} The part is extremely enlarged -

4^{thly} Most dreadful Symptoms precede, as fainting, palpitation, breathlessness, pain, apoplexy, sudden Death, & sometimes Dropsy. -

Whatever impedes circulation, favours the rise of polypii - Pulmonary impediments, ligatures, Aneurysms, weakness &c. Do acids or Spirits, which injected into Veins coagulate the blood, produce the same effects when

129
Drunk? 9 Grains of nitre injected into a
Dog by Clayton, suddenly killed him, tho'
Malpighi observed only an increase of urine
from a similar injection. Sea salt injected
produced thirst only. Soluble Tartar inject-
ed kills - To say the truth, so do oil wa-
ter &c. - All the neutral salts increase the
fluidity of the blood - especially nitre.

Sal mirabilis, & some other substances
akin to it coagulate the blood.

Acids produce diff^t Effects on the blood.
Regenerated Tartar keeps the blood fluid &
fluid - Vinegar does not alter the consis-
tence, but changes the colour into the
most disagreeable livid. - Forend says that
the distilled coagulates the mass - Injected
it has been sometimes said to kill, some-
times not.

Alum either does not coagulate, or does not destroy the red colour - Injected it kills. Vitrolic acid if strong coagulates ^{black} & makes it of a dirty injected, changes the blood into a clay colour, & gives it the consistence of an ointment - Poud on the blood it coagulates the Mass.

The Alkaline salts have been long thought capable of producing ^{opposite} effects. & have been reckoned Antidotes to the Acids - They increase, 'tis said, the colour & fluidity of the blood. - But Querna found that Sal Tartari if digested ^{with the blood} ~~the hard parts of~~ the Coagulum converted it into a syrup with a white Coagulum - Blood with Salt of diff't Vegetables, was chang'd into a hard Coagulum: & that the Colour was blackish.

131
Spiruous Liquors, or inflammable ones, if
strong coagulate the blood also - Volatile bil-
latts induce a pellicle like pleuritic crusts,
Cinnamon-water, a thin concretion. Lau-
dum rather favours fluidity - Spt Vini in-
creases the specific Density. -

Arsenic, the most deadly poison, co-
agulates blood & gives it a fine colour, as
milk does, while Vinegar a salutary arti-
cle of food, gives it a most abominable
one. Acids & Alkalis produce nearly the
same effects - so unequal are such mix-
tures to ascertain the nature of blood?

Severe exercise produces putridity in the
blood, fevers of the most fiery kind & death
itself - An aid-de-camp perished from fa-
tigue in the day of battle - From a quick
Journey under heat, a fever & a true

132 hydrophobia seiz'd a public runner - Motion here produced something like the poison of the Mad Dog. Convulsions have been known to produce the same thing.

Fevers produce remarkable disposition to putrefy - Ulcers have sometimes knock'd down the unwary as with Lightning.

The Samell wind produces dissolution in those on whom it blows. -

In scurvy & Rickets the humours have been found unconceivably ^{acid} so as to excoriate fingers & dissolve Linens; & so putrid has the breath sometimes been as to kill both flies & birds. More virinous salt than usual in the blood.

Urine, water of Dropses & hydatids, & mucus have all been rendered intolerably acid & fetid; In syphilitic glands & espe-

-ually in Cancer. The smell of one in 133
his wife's Mamma killed Bellingham,
a writer of some note. The liquor discharged
chang'd syrup of Violets, into green. Rashly
tasting it killed a Surgeon, who retained
to the last, a sense of the horrid flavour.

Putrefaction among other effects evolves
a great quantity of air. Hence the fish
meat lies at the bottom of water, when
it begins to putrefy, it rises to the top
supported by many bubbles. - In Scurvy
this ^{air} effused from the blood, serum & solids
resembles Emphysema. Blood confined
in a glass, swelled after 8 hours, emitted
an acid vapour, & then burst the glass
with an explosion.

Air is requisite to putrefaction. Hence
blood in a wound forms a polypus, & fæcuses
are carried about, for years without pu-
-tridity in

134 a shut womb - *Calcareous Earths* pro.
mole putrefaction - Some think all alkalis
do; & he said that the plague breaks out
first among washers at Constantinople
on account of the Soap employ'd. Any
thing putrid, whether Land Animals, Shell
fish or Vegetables as cabbage is most per-
nicious to the health.

Is there no acid in Animals? Ants
have long been famous for yielding one - but
young ones don't. Many other insects yield
an acid too - a woman whose bones were
soft had acid Exhalations from her thigh &
abdomen - Many animal substances parti-
cularly in youth yield it - Juice of Limes,
Milk &c. -

The proportion of water varies, both ac-
cording to the mode of making the Exp^t &

135

according to the health. - Some evaporate only the insipid part, others, leave only the dry, grumous part. - It has been very generally reckoned to contain $\frac{7}{8}$ ths of the whole.

When all the watery part of the blood has been raised by the heat of boiling water, a grumus remains at bottom, that effervesces with acids. - By an increase of heat, an oily, bitter, yellowish liquor, of a urinous nature rises, & it has been called the spiritus Sanguinis. 'Tis compos'd of the volatile salts of blood dissolved in a quantity of serum - A dram of which can dissolve 27 grs of the salt. 'Tis small & effervescence with acids readily betray its alkaline nature. -

Besides this salt there is oil contained in the Sp. Sanguinis for it makes

136 water milky, effervesces with the nitrous acid & puts on a crust of various colours. - It has so much acidity, that after a little delay it tinges the juice of the Sun-flower red. -

Sometimes one half of the dry greenous has been found $\frac{1}{3}$ of Spt weak & strong - & thus $\frac{1}{12}$ or $\frac{1}{18}$ of the mass of blood. -

In gout, hypochondriasis, & ^{Hysteria} ~~Jaundice~~, the urinous part of the blood is much increased - From 2 lib of bull's blood 1 lib $\frac{1}{2}$ of Spt were drawn -

after the Spt & along with it there ascends a pungent Volatile Salt, extremely penetrating. It is ramose, but the particles or ^{to Blood} amind separately are parallelopipeds - The addition of Quicklime produces more & stronger

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pt. with less Salt; whereas the addition
of Salt of Tartar produces the opposite effect.
It effervesces violently with Acids.

The quantity has been stated at many
intermediate numbers between $\frac{1}{180}$ & $\frac{1}{26}$.
Fevers increase the Quantity. -

A yellow oil rises next, & it effervesces
with Acids. The Quantity has been stated
at many intermediate Numbers between $\frac{1}{80}$
& $\frac{1}{11}$. The Quantity is affected by diseases,
tho' the thing itself be probably the pro-
-duct of fire.

The charcoal of the blood which
remains, is not a caput mortuum, for it
contains many Salts. - Its proportion has
been variously stated as $\frac{1}{45}$ & $\frac{1}{6}$ - a great dif-
ference.

From the Charcoal is obtained a
fixed Salt, resembling both marine salt

& alkaline. Its proportion varies,

The right subclavian Artery is larger than the left, but the degree is variously stated. Haller has found it as 35 to 29, 27 to 25, or 24 to 20. Sennae makes it as 23, 30g, to 15 12g. Syloa as 18 to 14. Hence the preference given to the right hand.

Glasgow Dec. 20 1785 -

139
A Child 10 months old died very much
emaciated, & with the head greatly swollen.
The complaint had begun at the age of 2
months & continued till pulsation ceased, 2 or
3 days before death. On dissection the bones
of the head were found thin, pellucid & sepa-
rated from each other by the distance of the
sutures. - The Teguments were thin. The sur-
face of the brain was pellucid & the substance
was so compleatly absorbed that in many
places it was not $\frac{1}{10}$ th of an inch thick. The
Ventricles were surprizingly enlarged, & enlarged
blood vessels run along their basis - The cereb-
ellum was soft & flaccid but contained no wa-
ter. - The whole brain & membranes filled an
enlarged measure, while the water contained in the
ventricles filled 4 pints & a half. - Some of it
coagulated with boiling heat, leaving a re-
siduum like whey in colour & consistence.

140 A ^{boy} child 6 or 8 days old was seized with
an Erysipelatous inflammation about the na-
vel - which quickly became livid & spread over
the whole abdomen, scrotum, penis & part of
the face. In 2 days it died - On opening the
body we found the black colour no deeper
than the skin which was not gangrenous.
around the umbilicus there was an appear-
ance of inflammation in the cellular substance
& muscles, & several small ulcers emitted
a considerable quantity of pus - Similar ap-
pearances of inflammation were seen along
the surface of the peritonaeum & in many
parts of the small Intestines. The scrotum
was very much swelled, owing to a kind of
substance very like Jelly which yielded a
little water on pressure. The Testicle was
buried among this substance, but it was
sound. -

John J. at 20 a Weaver of a heavy make ¹⁴¹
habit approaching to Leucophlegmatic.

Tuesday Dec: 6

McGouper saw him - He had violent pain of
the head chiefly in the fore part. P. below 70 tra-
ther full & sluggish. The complaints began on
the preceding Friday, after considerable feeling
of cold - & they have increased since. Took V. alts
on Sunday & to day applied leeches to his temples.
Dec: 7. Head not relieved by the leeches.

& came to Glasgow am. P. 60 full & sluggish.
Pain of the head violent. Was bled to $\frac{2}{3}$ in
the evening. Delirium & stupor came on. Head
shad. 11 at night blister applied. -

9th Marshal called. Delirium & stupor con-
tinue with temporary remissions. P. 60. To day &
yesterday frequent twitchings of the muscles of
the face & jerking back of the head. Bled to a
pound. In the Evg Delirium & stupor increased.
P. 70. ordered the saline mixture thro' the night.

10th a.m. Stupor & delirium increased. P. 70 Took
Salls & Manna. P.M. Delm & Stupor still in-
creased. 3 Stools from the Salts. A Large blister
applied between the shoulders. -

11th 142.

Some remission of the stupor & Delirium thro' the night, but they returned & increased towards morning. Pupil of the right eye much dilated & insensible to light. Some remission of the stupor about noon, but it increased in the evg with total loss of speech. P.M. Complaints the same. Took Calomel. gr. v. *clorura repet.* si nulla per noctem catharsis.

12. a.m. Delirium & Stupor less. P. 90. Took both Bolus without effect. P.M. Took Calomel 3ss. Delirium & Stupor much increased. In the evg 3 stools passed insensibly. Urine made insensibly today & yesterday.

13. Worse: P.M. Laborious breathing. 1. a.m. -

15. Head opened. - The Longitudinal Sinus gorged with black (clotted) blood. The vessels of the dura Mater somewhat turgid. The whole surface of the Brain unusually red - The large vessels uncommonly turgid, & others generally invisible, distinctly seen. Numerous red points appeared in the medullary substance when cut.

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about $\frac{3}{4}$ of water in the Ventricles, the ^{superior} ~~superior~~ surface of which was much ~~distended~~ ^{filled} with blood-vessels. Those of the plexus choroides were particularly turgid. Its cellular substance was distended with watery vessels like Hydroids. - In this case the vessels in the pia mater, ^{of brain.} were much more turgid than those of the Dura. - There was stupor & Delirium but no Phrenitis. - Might not early evacuation from the head have saved this wretch? - Was not the effusion of the water, merely the consequence of inflammation? - Was the water effused, the cause of the death? Was it not rather only the effect of the inflammation which produced all the symptoms & death at last? -

144 Alex.ⁿ — at 83. stout & black — Dec^r 1785

3 years ago had a difficulty of passing urine which was a little tinged with blood. Some small stones were then pass'd. A fortnight ago his complaints return'd with a total suppression of urine. For some days the catheter gave him perfect relief, & on the first application, after the urine had been retained several days, drew off more than a scotch pint. 5 days ago when the catheter was introduced the patient felt unusual pain - but after some resistance it went the ordinary length; some blood however was all that came away. Mean-time the distention of the bladder increased apace; & after repeated attempts no water came away. The catheter went on easily till it came very near the neck of the bladder, when all at once it met a resistance which could not be overcome without violence & pain. Blood always followed the smallest

145
violence. The finger in the rectum discovered
the sphincter out of the urethra. Injections of
different kinds were given both to empty the
bowels & stimulate the bladder. but with-
out effect. The warm bath, Dover's powder
& opium were also given, but without any
alteration on the symptoms of the bladder. The
pain was a little diminished. Being now
convinced that there was a topical com-
plaint, we left the unhappy patient to his
fate. - He retained his urine 3 or 4 days. On
the end of the 4th a considerable part of it
came away, but whether there was any
stone among it, was uncertain. About mid-
night the 5th day, 1786 he was opened. -

The bladder was still considerably dis-
tended containing between 1 & 2 ^{lib} pints of
urine. It's coats were amazingly thick
and almost every where above a quarter of
an inch, & the internal surface bore every

146. where striking marks of inflammation. In some places it approached to a livid colour. There were four stones in one corner of the bladder, near the right neck. - The most remarkable appearance however was the prostate gland. - It was compleatly scirrhous & extremely enlarged in every dimension, not less than 20 times larger than it ought to have been. It was more than 3 inches long, & as many broad, ^{& 2 thick.} Several hard humours were felt in different parts, & externally several bodies, like small garden peas could be squeezed out. It seemed to have shut up the ~~urethra~~ ^{urethra} very compleatly, & to have pressed very considerably on the rectum. - The greater part of the urethra was inflamed; within an inch of the prostate, it was black, & broken. At this part the catheter got out behind the prostate on each side, chiefly on the left which was inflamed, & where the catheter

147
was felt thro' the rectum. The Venulae semi-
nales &c were quite sound. Hardened faeces
were contain'd in various parts of the bowels,
but none of them nor indeed any other part
was examin'd wth accuracy.

A Shoe-maker aet 60 was seiz'd some
weeks ago with a pain in his throat. By &
by a Tumour began to appear on the fore
side reaching from the Pomum Adami to the
carotids on each side & 3 inches along the
Trachea. After violent symptoms of inflam-
mation, the tumour shew'd signs of fluctua-
tion. Some time elaps'd before it was open'd.
3℥ of good pus were discharg'd, but the hard-
ness round the edges still continued & no symp-
tom was abated. For some time the breathing
had been laborious, & deglutition first dif-
ficult, then impracticable. The attempt
produced not only pain but convulsions.

148 Haemorrhaging Clysters were given, but the respiration became more laborious; the Pulse sunk & the Patient died. The body was opened.

The edges of the Gummor, the only parts remaining had nothing particular in their appearance. The Trachea by candle light discovered little remarkable; but day light discovered a general redness over the whole surface from the Larynx down to the middle of the Trachea. About the middle of the Oesophagus too there were signs of violent inflammation. Nothing morbid could be discovered about any other part.

Poor's House - ¹⁴⁹ at 32 - Well made & stout looking. Has had several children. Jan'y 6th 1786
Six months ago, was seiz'd with some anomalous complaints, which she could not well describe. She had a pain in her back & hystericks. at present she has a pletic compleat palsy depriving her of all power over her legs & diminishing very much that of the arms. She can however speak. There is a very great swelling reaching over the whole abdomen. It ~~is~~ ^{is} hard, elastic & tense; with an obscure sense of fluctuation at the lower part. Some matter discharges away at the anus & urethra, & a dose of salts gave her very compleat passage tho' without diminishing the size of the tumour. P. quick. Thirst intense. face flushed. respiration difficult. The back was mortified some days before death, & the odor of the breath was intolerable. After death, much water came away ^{from the urethra} & some matter from the Anus.

150 on which the belly subsided very considerably. There was a complete necrosis in one of the legs. On dissection, there appeared some scattered marks of inflammation in different parts of the abdomen, particularly in the middle of the small guts, where there was a small portion very livid. The caput coli, & the sigmoid flexure contained still a quantity of air, but seemed to have contained much more before death. The intermediate spaces of the same gut were quite empty which probably was not the ^{case before} ~~consequence~~ death. This whole gut seems to have been fully distended during life. Nothing morbid nor indeed particular, could be discovered in any other part of the alimentary canal. - The bladder was very much distended, tho' it felt perfectly flaccid. Its coats were thickened & its capacity much enlarged. Above 3 English pints of high coloured

fresh smelling urine were taken out. The ¹⁵¹pan-
creas felt very hard, but on examination
was not schirrous. The cystic Duct was
filled up with a stone & in the gall blad-
der there were 30 of the same size (that of
peas) besides a number of smaller ones.
These were floating in a small quantity of
gall-blackish, & about the consistence of
coffee-grounds or thin Tar.

Notes. Undoubtedly the Tumour was occa-
sioned by the distension of the Colon, but what
occasioned that distention? Was it a palsy of
the Intestines, or the pressure of the bladder
against the os sacrum, squeezing the gut? Why
was the bladder itself so much distended,
that there was no mechanical obstruction
appears from the perpetual dribbling? Were its
coats paralytic? & was the dribbling owing
merely to the mechanical distention? Might
not this woman have been saved? Was one
dose of Salts enough here? - Ehre! -

152 John Wilson at 60 -

A Stocking weaver died very much emaciated. For some time he had been unable to swallow freely. The food passed easily down to a certain point, but from this point it was thrown back. Antispasmodics had given him ease, & two or three days before his death he had spit up pus with relief. On opening his body the following appearances presented themselves.

On removing the Trachea the Oesophagus for the space of three inches above the cardia felt as if full of hard separate tumours, some about the size of a bean, some running almost round like a ring tho' which the finger could hardly

be thrust. On the posterior part of the¹⁵³
Esophagus there were some small black
globes, which when punctured emitted
black blood. They were about the size of a
pea. On opening the other tumours & rings,
pus came out from some, others had a
schirous appearance. The whole inside
of the ~~trachea~~ Esophagus for two inches
and a half was black, particularly in
that part which had been joined to the
Trachea, or rather immediately below the
division of the Trachea into its two branches,
but whether any cancerous perforations had
been made before death or not I cannot
say. The whole inner surface of the black
part was rough, & full of erosions which
in some parts had formed little sinuses

154 whose lower extremities penetrated almost quite thro' the oesophagus. Between the extremity of this morbid part & the cardia the tube was more red than in other parts.

A little below or immediately over the Cardia, on the upper line of the stomach there was a small tumour, like a little walnut, to which part of the spleen seemed to adhere. - But this tumour did not compress the Cardia, tho' it might occasion irritation there.

About $\frac{3}{4}$ of pus were found in the cavity of the stomach. -

Glasgow July 2^d 1786 Jenny Rains at 13.

About a year ago received a blow
on the right side from a brick thrown
at her, after which she was seized with
violent pain, inasmuch that she used
to start from her bed with sudden shrieks
& moved with difficulty. A variety of re-
medies were employed to expell the
worms from which the pains were sup-
posed to originate. Some of these together
with country air were of use, at least she
became easier, but some months ago
her belly began to swell, & 13 english
pints of water were drawn off. Many

medicines too were given but without relief. The swelling indeed ceased, but the pain continued undiminished. Breathlessness came on; her visage acquired the hectic hue & she died in strong convulsions.

Before opening the abdomen, I felt it very carefully. There was no hardness about the region of the liver, tho' the Patient had complained of pain there. The belly was soft & not much swelled.

On opening the abdomen, the surface of the small bowels appeared livid, rough

covered with small white rough excre¹⁵⁶-
cences, from the size of a mustard grain
to that of a white pea. Every part of
the small guts adhered to each other.
and the arch of the Colon adhered like-
wise to the parts near which it passed.
In the left Ileum the sigmoid flexure
was much thickened, had several ma-
ternatural adhesions, & was studded all
over with the white excrescences alrea-
dy mentioned. They were most nume-
rous about its mesentery.

The stomach was covered by a
thick fatty membrane by which it
had been firmly united to the Con-
cave

157 = convex surface of the liver. Its convex surface adhered to the ribs almost in every point.

On cutting into its substance nothing particular appeared.

The spleen contained a small quantity of pus. —

The Thorax was not examined.

There is an inflammation of the bowels which has lasted very long, and before producing death, it had produced adhesion, effusion of coagulable lymph & effusion of water. It began probably in the peritoneum near the duodenum where the stroke was received. —

John Warwick at 30 or upwards a ¹⁵⁸ son Spinner.

Was in the army about 14 years & received a hurt on the side. Some months ago, after a variety of anomalous symptoms, he was seized with violent coughing which brought up 3 or 4 english pints of frothy blood. He was hot & much pained, sweat flowing from every pore. $\frac{3}{4}$ of blood were taken away from a large orifice, and some vitriolic acid was given, after which the hemorrhage ceased, & never appeared afterwards.

Opiales with mucilage quieted the

159 cough so much that he slept pretty well, and acquired strength enough to walk about, but the cough never left him entirely. At last it became terrible, accompanied with dyspnoea, ^{palpitation} violent pain of the breast and after being worn down to a skeleton by most exquisite sufferings he died July 9th 1786

Before we could open the Thorax we found it necessary to empty the abdomen which contained 4 scotch pints of water. The Omentum was completely wasted. The Liver was smaller than usual, and seemed harder. All the

other bowels were natural.

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The Cartilages of the ribs being cut & the Sternum raised, a horrid scene was presented to view.

The upper surface of the pericardium was covered with a frothy gelatinous substance. Its sides adhered firmly to the concave surface of the left Lobe of the Lungs. The convex surface of the same Lobe adhered to the ribs, the vertebrae & the Diaphragm so firmly that it was separated with great difficulty.

The left Lobes of the Lungs being taken out & examined, their substance

161 was full of tubercles, many of which were filled with pus. Several branches of the trachea communicating with these tubercles were also filled with pus. About the middle of the convex surface, numerous erosions appeared, communicating with each other & penetrating to a considerable depth into the substance of the Lungs, which were every where more solid & hard than the Liver usually is. The lowest Lobe on the left side was in every respect the hardest & most morbid. Over the arch of the Aorta, just where

The Trachea divides into two 167
branches, there were several sub-
stances about the size of a Ches-
nut, and others of a similar na-
ture in different places, from the
size of a common pea to that of
a nut. The surface was smooth,
the substance uniform, soft, of a pale
brown colour throughout. They seemed
to be ^{lymphatic} ~~muscular~~ Glands enormously
enlarged.

In each ventricle of the heart there
were large polypi, occupying a con-
siderable portion of the cavity, & run-
ning from thence 3 or 4 inches into the

163 pulmonary artery and the Aorta.
These polypi were of a pale yellow
colour, pretty tough, smooth on the
surface, and in the interior pearls
when broken, about the consistence
of coagulum to which I suppose they
owed their origin.

Along the inside of each ventri-
cle, round pedestals about $\frac{1}{4}$ of an inch
in diameter firmly united by one side
to the substance of the heart, stood up
to the height of an inch. From these
as from a root the columns carneæ
arose. They resembled the substance of
the heart entirely, but must very

much have diminished its cavity.⁶⁴
The inner surface of the ventricles
was more rough & full of hollows than
usual. The left Auricle was remark-
ably small, owing I suppose to the
small quantity of blood which it re-
ceived from the pulmonary veins.

The substance of the Lungs in the
right division of the Thorax was less
injured, but there were some tubercles &
a few adhesions here also. On some
parts there was a slimy film, and
part of a similar film effused into
the cavity together with some blood &
water.

165 On examining the bowels, we felt something hard about the duct of the Pancreas. The hardness seemed to arise from a tumour of some glands similar to those already mentioned in the Thorax. — Remarks.

The frothy blood probably got into the extreme vessels of the Trachea at the parts which bore the marks of erosion. The various obstructions, tubercles & adhesions of the Lungs not only rendered respiration painful, but obstructed circulation so far as to produce ascites. It is wonderful that in this state he lived so long.

at-

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Had a remarkable difficulty of breathing. Face flushed; voice hoarse; Pulse small about 120. Prior to her present complaints was much addicted to spirituous liquors. Was bled twice; & blistered without relief - Died.

On opening the Thorax adhesions were observed on each side of the mediastinum, partly to ^{the pericardium} it, chiefly to the ribs. The upper lobe on both sides was much diseased, being solid, unequal & hard, full of little ulcers & totally stuffed with blood & mucus. A considerable quantity of pus flowed into the cavity of the Thorax when we cut

167 out the left lobes of the Lungs, but we could not determine the part from whence it flowed. Just over the division of the Trachea we found some hard bodies about the size of small nuts. They seemed to be mucous glands, and one of them contained a stone.

As the Liver seemed to push up the Diaphragm, we cut into the abdomen to examine it. It was much increased in size; was hard; of an iron color with livid edges. Hardly any blood appeared from incisions into its substance. Nevertheless the gall-bladder seemed full of bile.

As the whole mass of Lungs was so affected that the opening of the Sternum did not make them subside in the least.

James Pindon at 6 months - very fat & ¹⁶⁸
healthy. Ever since birth had his breasts
distended with milk, which was regularly
drawn every morning. Augst 23^d. A fort-
night ago the mother omitted to draw one
of the breasts which is now hard & swells.

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A cure for Scrophula from the Gazette
de sante. Oct. 1786

R^y Aquevites or Brandy $\frac{3}{4}$ XX

Salis volubilis fixi concreti

Radix ^{Gentiana} ~~Fetwort~~ or Balmony a $\frac{3}{4}$ lb.

Let these be infused in the Liquor for
24 hours - after which let the roots re-
main in the liquor as it will this be
come stronger. A table spoonful should
be taken before dinner, & another before
supper. -

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John Top at 27- Served as a Marine
on board Heppell's fleet on the memorable
27th of July 1778 & at that time received part
of a grape-shot which shattered his arm &
entered his breast between the 3^d & 4th rib.
His wound was so far cured that it gave
him little uneasiness, but still continued o-
pen. However, having procured his discharge
he returned to this his native city & wrought
at his trade which was that of a Black-
Smith. For some time he seems to have had
little complaint except a short cough &
some degree of breathlessness; but 2 years ago
he was seized with great pain on the wound-
ed side, the wound discharged an uncommon
quantity of foetid matter, the whole side

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look'd red, & a painful tumour appeared
about the Cartilage of the 7th rib. He had
applied to many practitioners, from whom
he had receiv'd emollient ointments, purg-
ing pills, strengthening powders, a chord &
I know not what. In the beginning of win-
ter he sent for me. I found the pain of his
side so intolerable that he could hardly move
without crying; the skin from the upper wound
to the left hypochondrium was of a fiery red;
upon pressing in the ribs, matter flow'd out
at the upper orifice, & upon pressing the tu-
mour below it evidently seem'd to contain
matter. In this place the Patient insinuated
that he felt a ball, & I agreed with him
perfectly. As he was reduc'd to a perfect
Skeleton, as he had a violent cough, diar-
rhoea, hectic sweats & almost every other

bad symptom there was no encouragement¹⁷⁸
for performing an operation; on the other hand,
he was in danger of immediate death, his pain
was extreme, & the operation was perfectly sim-
ple. For these reasons I did not hesitate to
propose it, warning him at the same time
how little he had to expect from it. I should
do injustice to the spirit of this worn-out ve-
teran to say that he acceded to the proposal.
He acceded it with rapture, testified his re-
signation as to the consequence, but wished
if he could not be saved from death to be
saved at least from some of the pain which
he had endured.

My Friend Mr Monleith visited the Pati-
ent, advised the operation & not only performed
it himself, but supplied the Patient with me-
dicines. He cut pretty deep upon the tu-

near before any matter appear'd; at last it gush'd out in abundance, & ^athis ragged piece of iron was taken out from the bottom of the wound. The patient was instantly eas'd. He slept soundly, lay equally well in various postures, cough'd little, ~~eat~~ ^{ate} a good deal & once or twice ventur'd into a garden to enjoy the fresh air from which he had been so long secluded. These appearances swell'd his heart with hope & he began to congratulate himself as a Man deliver'd from the grave after having touch'd its brink. Several circumstances however show'd us that his hopes were deceitful. Even in the fullest inspirations the left side of the thorax never appear'd to be dilated; the incision made by Mr. Monteith soon heal'd, but the upper & original one never clos'd, on the contrary it continued still to pour out matter as before, tho' in smaller quantity & with

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lep factor: besides, altho his skin became
clearer, & his strength increas'd, he continued
still lean, sturvid & ghastly, in spite of a
good appetite, strengthening medicines & nou-
rishing food. - We were still more alarm'd
by fits of sickness, cough & diarrhoea attack-
ing him after short intervals, & at length he
died complecally hectic in the 3^d or 4th
month after the operation, after having enjoyed
some weeks & many days of comfort, tho' none
of perfect health..

We had form'd many conjectures as to the
course of the ball from the inside of the 3^d to
the outside of the 8th rib & they were confirm'd
by the appearances on dissection, which I was
very anxious to have shown you but could
not, for which reason I shall state them as
distinctly as I can.

We began with opening the place

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from which the ball was extracted to discover whether its course had been without the ribs or within. We found a bag that had contained matter reaching from the cartilages of the 7th 8th & 9th rib, backwards about 2 inches & upwards between 3 & 4. - Beyond these limits the parts were natural, so that there was no communication between the upper surface & the place where the ball was lodged.

Between the 7th & 8th rib, ~~between~~ ^{immediately over} the Diaphragm there was an opening into the cavity of the thorax, while almost the half of the ~~8th~~ ^{8th} rib in the part next to the opening was consumed & rough but perfectly free from caries. We next ^{divided} cut the cartilages by which the ribs adhere to the sternum then having sawed thro' the ribs at their posterior angle, we turned them back so as to discover the whole left cavity.

With this the original wound communicated very evidently. The upper lobes of the lungs

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adhered in several points to the parts above;
the pericardium was very much thickened,
seem'd also to have adhered in various
points to the pleura of the ribs & contain'd
a considerable quantity of water. The upper
lobe of the lungs was of the natural size,
but was solid, hard & contain'd some matter,
but the lower lobe instead of being of the na-
tural size was compress'd into a size not much
exceeding that of a walnut, & not unlike the
labeus spigelii in shape. From the 3^d
rib where the ball originally enter'd to the
8th where it came out there had been one
immense bag of pus, some of which still re-
main'd, while the traces of the rest were per-
fectly apparent. The internal surface of the
ribs seem'd bereaved both of pericosteum & pleu-
ra, and the red fibres of the intercostal mus-
cles seem'd to indicate also a total want of

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The pleura, while the pericardium & the lower lobe of the lungs were covered with a glairy matter & a thickened membrane.

The axillary gland was increased to this enormous size. -

Remarks.

The proper time for extracting this bit of man was allowed to go by; if it had been more timely improved there would have been a very considerable chance of recovery, tho' the left lungs must have remained nearly useless & would besides have been very liable to injury. N.B. always connect present complaints with the past history of y^e Patient, & never neglect the feelings however bizarre or unaccountable they may appear. This poor fellow often said he felt a ball moving down his side, but he was always assured it was a mistake!

M Lacklan At a Nurse 3 months

Feb 20th 1787

Was seized with violent stitches, & severe vomit-
ing, and in a day or two expired. After death
the Abdomen swell'd very considerably. On open-
ing it, 4 or 5 pounds of fluid were found
in it. It was white, about the consistence
of pus & seem'd to contain some faecal mat-
ter. The whole ^{upper} surface of the peritoneum
was inflam'd, as was also the upper sur-
face of the stomach, the whole omentum,
the folds of the small guts, the Ovaria &
the extremity of the fallopian tubes. The o-
mentum every where tender, was in some
places consum'd, with every appearance of ul-
ceration. About 1 1/2 inches above the insertion of
the Ileum into the Colon, there was a livid
spot & in the middle of it a hole from
whence much air & matter had issued

into the cavity of the abdomen.

Glasgow April 1788

A Woman bore 4 Children, 2 boys & 2 Girls. Each was inclosed in a separate membrane & preceded by a great flow of water.

The 3^d born died just, a very little after birth. The 2^d lived 24 hours; the 4th lived 2 days & the 1st lived 4 days, viz from Tuesday 9 o'clock h. m. to Saturday a little past 6 a. m.

By weight & inches to 3

The 1st born measured 16. 3. 2

2 ————— 15, 2. 4

3 ————— 16 $\frac{1}{2}$, 3, 6

4 ————— 18, 3, 8.

The Woman was like to suffocate before

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birth, & always said she had 4 in
moons. - Maltreated by her husband.
Bore her children in the 7th month. -
Recovered ill. Never could pass urine.
Grouds - Died. -

The placenta was double, united by
a Membrane in the middle, & contain-
ing two fœtus in each. -

John Hamilton Shoe Maker in
Gorbals at 50 & upwards. -

3 years ago was seized with a
violent stitch in the left side, from
which he recovered without being
bled. He had afterwards a constant
pain in the part; dyspnoea; cough
quick pulse & great weakness. -

Every symptom increas'd in spite
of setons, demulcents & every other re-
medy both local & general. Dropsical
symptoms came on & he died. -

Upon cutting into the Thorax we
found as we expected, universal ad-
hesions. A great quantity of water
not less than lib^{ss} were taken out

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of the cavity; & IV from the pericardi-
um & a great quantity from the Me-
diastinum where the liver seemed harder
& whiter than natural. -

The heart was extremely flaccid &
free from fat. Its inner surface was
like that of a heart long macerated
& boiled. The right cavities were
greatly larger than the left, ow-
ing no doubt to the obstructed Lungs.
The chief adhesions were immediately
around the heart. The ~~Lungs~~ ^{Pericardium} stuck
to the whole concave surface of the
Lungs, to the convex surface of the
Diaphragm which was covered with
a red thick substance & seemed to have
contained pus. - Bragg M.D. Paton
Surgeon General.

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Glasgow June 1788-

Mr Muir at 51. A thin tall man of an
won colour, deeply pitted with the small-pox,
after suddenly changing his winter-dress
was seized with a pretty sharp pain in
the region of the Liver, shooting up to the shoul-
der of the same side. His pulse was exas-
perately hard, above 100. He breathed freely &
cough'd none. Belly costive, Tongue a little
white & fur'd.

He was bled the 2^d day after being tak-
en ill, with some relief, but the pain soon
returning, a blister was applied. The Pulse
being still hard, he was bled repeatedly, not
less than ten times, the blood being from the
beginning, buffy in the extreme. On exami-
ning the Liver, a swelling was evident with
softness rather than fluctuation. The blister

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was renewed & cupping-glasses were applied. Saline purges were given from time to time.

at last his pulse became not only soft but weak, its quickness however which was much increased, shewed that the vomiting cause still continued to operate. He fell into profuse cold sweats; his spirits were oppressed; his visage ghastly; his sleep, whether he got an opiate or not, unrefreshing; & a singulus attended him pretty frequently. at least 12 or 15 days from the commencement of his complaint, he died suddenly at 3 o'clock a. m. just as he was proposing to try if he could get a stool for easing a painful feeling in his belly.

We believed this case to be an inflammation & suppuration of the Liver, & we wished to satisfy ourselves by dissection.

Upon opening the Abdomen we were struck with the appearance of the intestines which were pretty universally distended, turbulent on some points of their surface, & in various parts apparently dispos'd to gangrene. The end of a particularly fold had got between the ribs of the right side & the liver, on the surface of which it lay having formed for itself a little depression. On turning back this portion we found it was the colon at lower part of the Sigmoid Flexure. A double stricture had been found on the Os Sacrum by the adhesion of the mesocolon; from which as from a fixed point, the doubled gut stretched along till it reached the liver.

The Diaphragm above & the stomach below the Liver were redder than natural.

The Liver near its convex surface contained

a bag from which issued at least $\text{lib}\frac{1}{2}$ of ¹⁸⁶
thick faecal mass, part of which had got into
the cavity of the abd.ⁿ before death. Below
this bag there was another wh. contain'd
 $\text{lib}\frac{1}{2}$ or lib more.

No operation could have discharged
this horrid mass, which was thick &
clotted. - The mesentery too must have been
cut. - Was this collection formed in the
course of 12 days, notwithstanding the very
copious evacuations? - Was the position
of the intestine the cause of hepatitis by
its pressure? Was this position owing to
original structure or to accident? Some
time ago he got a kick in the lower
part of the belly, since which he was
never free from pain. - Did this kick
produce adhesion? et hinc omnia? -

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Saunders's Table of

Claps	Name	highest — contents		
		temp ^r	wt. of solids	cu. in. of solution
Simpler cold	Malvern			uncertain
	Holywell			
Simpler Thermal	Bristol	74°	uncertain	3.75
	Mallock	66°		uncert.
	Buxton	82°	0.494	uncert.
	Sedlitz			1
Simple Saline	Epoom			
	Sea			
Highly carb. alkaline	Seltzer			17
Simple carb. chalyb.	Lunenburg		0.675	1.325
Hot carb. chalyb.	Bath	116	1 ²	1 ²
Highly carb. chalyb.	Spa			12.79
	Pymont			26
Saline carb. chalyb.	Cheltenham		uncertain	5.687
	Scarborough			uncertain
Hot, Saline, highly carb. chalybeate	Vichy	120 ²		8°
	Carlsbad	145		8°
Vitriolated chalyb.	Hartfell			
Cold Sulphureous	Harrogate		0.875	1
	Moffat		0.5	0.625
Hot, alkaline Sulphureous	Aix	143°		uncert.
	Borset	132°		8°
	Barege	120°		

Mineral Waters + Neutral hanging Salts, wt + 188

in English hnt of 28.875 cubic inches

Sulph. acid Soda carb. + g. * 3

0	0	Unc ⁿ	Unc ⁿ	0
None	0	20	20	0
0	None	2.81	3.16 2.81	0
0	0	unc ⁿ	unc ⁿ	0
0	0	0.25	1.625	0
0	0	185.6	8.68	0
0	0	40 ²	8 ²	0
0	0	237.5	6	0
0	4	17.5	8	0
0	0	0.344	0.156	0.125
0	0	10 ²	10 ²	unc ⁿ
0	21.47	4.632	1.47	0.56
0	14 ¹⁰	7.13	23.075	0.56
unc ⁿ	0	62.125	6.85	0.625
0	0	20	10	unc ⁿ
None	unc ⁿ		Unc ⁿ	20
0	Uncⁿ	47.04	4.15	20
0	0	0	0	4.8157
0.375	0	91.25	3	0
1.25	0	4.5	0	0
uncertain	12	5	4.75	0
unc ⁿ	unc ⁿ	unc ⁿ		0
20	2.5	0.5	unc ⁿ	0

* Selenite & earthy carbonates.

3 Oxid of Iron

+ or Sulph. of

Soda & Mag.^a; me

ures of S. & of

Lime. - The Blank

signify our igno-

rance whether any

thing at the head

of 4th column be

contained or not:

None signifies a

certainly of none;

uncertain, means

there is some, but

the gth not ascer-

tained.

+ i. e. 2.04 contained

in 4th Sulph. of Iron

this cont^g when exp-

lled 28^{wt} (oxid

of Iron in there as) &

1.875 additional oxyd

of Iron. -

Receipts copied from various Authors.

Amylum used in	Mucil. g. arab. ℥i
Althæis - w. p. advantage	Aq. Cinnam — ℥ii
℞ Amyla ℥i	— M. pih — ℥iv-
Aq. — lib. f.	Syr. Zinzib. o simp ℥ss M
Coq. ad ℥xii. adde	Loch. ii Dos. mo adueto.
Syrup alth ℥i M	Antiphlogistica-
℥ii. 4 ^{ta} quaq. hora	℞ Sal. Nitri — ℥ii
Absorbente —	Sacch. albi — ℥ss
℞ Magnes ℥i	g. arabica ℥ss M
P. Rhoi q. xv	Dos. ℥i. 3 ^{ra} vel 4 ^{ra} ind.
a. Menth. hih ℥ii	Nitrous Suleph
— Cinnam — ℥iss	℞ Sal. Nitri ℥ii
Syrup — ℥ss M	Aqua — ℥iv
Loch. h. Dos. mo Inf. —	aceli —
℞ Cret. pp. —	Syrup — a ℥i M
vel ocul. Cancro ℥ss	Dos. ℥i. 3 ^a q. hora. —

Antiseptica

R L. her. contus $\frac{z}{11}$

Myrrh. & - a $\frac{z}{1}$

infund in aq. bull. $\frac{z}{x}$
cola et adde

Ext. Sitr. ten. q. s. ad
coat. sap.^m - f. Garg.
Ino Lyn. maligna. -

Antispasmodica

R P. Sal & Sylo $\frac{z}{1p}$

Lanel. alba q. v. $\frac{z}{4}$

Lact 3^o ind. -

R ap. folid $\frac{z}{111}$

Sapon Venet $\frac{z}{1}$

Opie .

f. XV

Mucil. q. s. f. Maf.

R Amygd. dule No ¹⁹⁰ $\frac{z}{11}$

Lamph. - $\frac{z}{1}$

Aq. huleg. - $\frac{z}{VI}$

Syr. Balsam

Mucil - a $\frac{z}{1}$ $\frac{z}{11}$ $\frac{z}{11}$

f. Emulsio -

R Lamph. pur $\frac{z}{11}$

Mucilag - $\frac{z}{11}$

solve et adde

Aq. Font - $\frac{z}{VI}$

- Linnam $\frac{z}{11}$ $\frac{z}{11}$

$\frac{z}{1}$. Ino Dos.

R Moschi pur $\frac{z}{p}$

Mucil - $\frac{z}{1}$

Aqua - $\frac{z}{1p}$

- Linnam

Syrup. Bals - a $\frac{z}{p}$

Dos $\frac{z}{1}$ 3^o ind. -

¹⁴¹
℞ Camph. hura q. VIII
Spt Vini q. alig. ut
solv. Camph. dein
ad. Syr. Bals ʒII
Aq. M. pip ʒVII^{1/2}
ft haustus -

℞ Tinct Castor -
Spt Lav Comp. a ʒI
L. Liq. ʒII^{1/2}
g^o LX no Dose. -

Aqua Mineralis -

℞ Sal. Glaub ʒss
- Marin ʒi solv
in Aqua ʒIV Lach
ʒss O.M. ex aqua

℞ Tart Solub
Sal Glaub a ʒI
Polych. mar. hisp. a ʒss
aqua ʒVIII - solv
Dose ʒII ex aq. lib. ss.

℞ Sal Tartar -
- Glaub a ʒII
Mar. Hispan. Polych. a ʒss
solv in aq. libi. - solv
Dose ʒoch II vel III ex aq. libi
omni Man. donec alb. res.

Dr Irwin's receipt for
making Seltzer Water

℞ Aq. Deshell lib VIII
Sal. commun ʒI ss
alkal. fossil sic ʒII
Magnes. alba ʒi
Cret. alba q. XIV^{1/2}
et gradatim add. Aeris
fixi q. s.

Aq. des. Sal com. alk. f. Mag. ʒi
libi - q. XI^{1/4} - T XV^{1/2} ʒII ss.

Dr Irwin's receipt for
Pyrmont Water -

R^y Ag. destil - lib VIII
Sal commun q^r. X
- Lithart. amar 3℥
Liquor Vitriol III
- alba — 3℥
magnes alba q^r. XVI
Lun. Martis q^r. II℥
in adde aeris fixi q. s.

Dr Elliot's method of
impregnating water
with different airs.

Take of Sulphur -

Pot. ashes - lb. 29 -
Quicks lime well
burnt may be used
instead of P. ashes
mix them & put
them into a crucible
or unglazed dish over
a very gentle fire. Stir

them with a stick till¹⁹²
they unite into a red
mass, & put this while
warm into a close vessel
of oil -

From this red mass, when
oil of Vitriol is added
to it, the Sulphureous
air will arise in the
same as the aerial gas
does from Chalk & Sol. Vitri.

The water impregnated
with this becomes sulphu-
reous, like that of Aix
la Chapelle - Moffat &c.
When heated (by immersing
the close vessel containing
it) in boiling water it
becomes a warm sul-
phureous water.

This air is obtained from the common hepar Sulphuris, also, & still better from the following -

℞ Limat Martis ℥III
 & lor Sulphur — ℥II. ~~℥II~~

et lique in Crucibulo - Pour the melted matter into a wa-
 ter & keep it in a close
 vessel, to be used inst. of hepar Sulph.

Spa Water

℞ Sal. Sodae alk. fof. ℥
 Sal com — q.^r XII
 Aq. hur & — long.^m 1.
 addle Limatur Mar. g.^r alig.
 et addle Aeris fixi. q. s.

Peucedan Water like
 our Eps om
 ℞ Sal. Cath. amar ℥III
 aqua longium unum,
 aeris fixi q. s. —

Aix La Chapelle ℥
 ℞ Sal. Marin ℥ss
 alkal. fofid ℥I
 Ret. pp. — ℥
 Aq. hur. — lib VIII
Aeris Sulphur. q. s.

Mineral waters may in general be imitated by adding Epsom Salt for purging water, Sea-salt for salt waters &c. Some waters (as the cold Sulphureous) contain both fixed & Sulph.^r airs, a mixture of hepar Sulph. or the subtilities formerly mentioned, & chalk may be at once mixed with ol. Sibioli - These both airs will arise. —

^{by Dr. Higgins -}
Tisbury alterative wa-
ter - Winchester Gallon - con-
tains -

of Calcar. Earth satu-
rated wth acid^s Gas $\text{H} \text{ gr}^{\text{viii}}$
of blue gas with ba-
sis of Fe^{a} alkali $\text{H} \text{ gr}^{\text{ix}}$
of Sea Salt - $\text{Zl, H} \text{ gr}^{\text{ii}}$
of min^l. alkali - $\text{gr}^{\text{i} \frac{1}{2}}$
of min^l. Orogenous matt^a - $\text{gr}^{\text{i} \frac{1}{4}}$
Sept. 22^d. 1779 $\text{Zll, H, gr}^{\text{ix} \frac{3}{4}}$

Two quarts of acidulous
Gas (which in density
is to temperate atmosphe-
ric air, nearly as two
to one), are contained in
each Gallon, besides the
quantity of this Gas re-
tained by the calcare-
ous earth in the heat
of boiling water, -

¹⁹⁴
Bristol hot-well
Water - Win^l. Gal. -
contains of Calcar.
Earth joint with
Fibric acid in the
form of Selenite - $\text{gr}^{\text{viii} \frac{1}{2}}$
of D. with acidu-
lous Gas - $\text{gr}^{\text{xi} \frac{3}{4}}$
of marine Salt of
Magnesia - $\text{gr}^{\text{v} \frac{1}{4}}$
of Sea Salt - $\text{gr}^{\text{vi} \frac{1}{2}}$
H - gr^{ix} xiii.

It moreover contains
8 or measures of aci-
dulous Gas, besides
that retained by the
Calcar. Earth in the
heat of boiling water,
& 2 or measures of air
equal or superior to
atmospheric air in
purity. -

19⁵ Harrowgate Water -
 11th Gallon contains
 of Calc^e Earth saturated
 with acidulous Gas $3\text{lb } 9^{\text{th}} \text{VII} \frac{1}{2}$
 Marine Salt of Mag^a $2\text{V } 9^{\text{th}} \text{XI} \frac{1}{4}$
 Sea Salt - $3\text{I } 3\text{II } 2\text{II } 9^{\text{th}} \text{VII} \frac{1}{2}$

$3\text{I } 3\text{V } 9^{\text{th}} \text{XI} \frac{1}{2}$

It moreover contains 4 oz
 measures of acidulous Gas
 besides that ret.^d by the Calc^e
 careous Earth in the heat of
 boiling water, & 35 oz mea-
 sures of solid inflamm-
 able Gas or Sulph^r. Air..

Bath Water -

Minth Gallon contains
 of Calc^e Earth - with Vib^r
 acid in form of Selenite $3\text{I } 3\text{II } 9^{\text{th}} \text{I} \frac{9}{10}$
 of d. w. acid. Gas - $9^{\text{th}} \text{XXI} \frac{3}{10}$
 of mar. Salt of mag^a - $9^{\text{th}} \text{XXI} \frac{9}{10}$
 of Sea Salt $2\text{I } 9^{\text{th}} \text{XVIII} \frac{1}{10}$
 of Iron with acid. Gas $3\text{II } 2\text{II } 9^{\text{th}} \text{XXV} \frac{1}{10}$

It moreover contains
 12 oz measures of aci-
 dulous Gas (besides
 that retained by the
 Calc^e. Earth & the iron
 in the heat of boiling
 water, & two oz mea-
 sures of Atmosph^c air.

Scarborough Water

Minth Gall^{on} contains
 of Calc^e Earth combin^d
 with Vibrioluck acid
 in form of Selenite $3\text{I } 9^{\text{th}} \text{II} \frac{1}{2}$
 of d. w. acid Gas $2\text{II } 9^{\text{th}} \text{VII}$
 of Marine Salt of
 Magnesia - $3\text{II } 2\text{II } 9^{\text{th}} \text{XII}$
 Iron combin^d wth $9^{\text{th}} \text{II} \frac{1}{2}$
 acid. Gas - $9^{\text{th}} \text{XXV} \frac{1}{10}$

$3\text{IV } 2\text{II } 9^{\text{th}} \text{IX} \frac{1}{2}$

It contains moreover
 96 oz measures of
 acid. Gas (beyond

the quantity retainable
by the $\frac{1}{2}$ Earth & Iron
in the heat of boiling
water, & $\frac{1}{4}$ oz mea-
sures of phlogisticated
air.

of Sea Salt — $\text{g}^{\text{vii}} \frac{196}{10}$
of Min.^e Oleginous
Matter — $\text{g}^{\text{r}} \frac{1}{10}$
of iron combin'd w^d
acid? Gas — $\text{g}^{\text{iii}} \frac{5}{10}$

241 $\text{g}^{\text{r}} \text{XVII} \frac{4}{10}$

German Spa Waters
Min.^e Bohoun — contains
of Sal.^e Earth found w^d
acid? Gas — $\text{g}^{\text{r}} \text{XII}$,
of Mag.^a combin'd w^d
acid? Gas — $\text{g}^{\text{r}} \text{XVII} \frac{2}{10}$
of mild mineral alk.ⁱ
weigh'd in $\frac{1}{4}$ c. crystalline
form — $\text{g}^{\text{r}} \text{XVI} \frac{8}{10}$

It likewise contains
132 oz measures of aci-
dulous Gas, besides
that retain'd by the
Sal.^e Earth, the Mag.^a,
Min.^e Alk.ⁱ & Iron in
the heat of boiling wa-
ter, & $3\frac{1}{2}$ oz measures
of Atmospheric air.

N. There are 3 springs, viz
Bohoun in the middle
of the village Spa; Sou-
venir, a mile & half dis-
tant; & Chevron or Pore
3 miles distant. —

Chevron or Pore —
Min.^e Gallon
contains

197
 of L^{e} Earth combined wth
 Acid^s Gas $g^{\circ} \text{VI} \frac{1}{2}$
 of Mag^a combined
 with D° — $g^{\circ} \text{VII} \frac{1}{2}$
 of Iron comb^d wth D° — $g^{\circ} \text{III}$
 of mild mint alkⁱ
 weigh'd as before — $g^{\circ} \frac{1}{2}$

It contains moreover
 $12\frac{1}{4}$ oz measures of
 acid^s Gas (besides that
 that H & $\frac{1}{2}$ oz mea-
 sure of Atmospheric
 air.

Louvenire Water

W. Gallon contain
 of L^{e} Earth combined
 wth Acid Gas — $g^{\circ} 6 \frac{50}{100}$
 of Mag^a wth D° — $g^{\circ} 4 \frac{50}{100}$
 of Iron wth D° — $g^{\circ} 2 \frac{20}{100}$

of mild mint alkⁱ
 weigh'd as before $g^{\circ} 1 \frac{50}{100}$
 of Sea Salt — $g^{\circ} \frac{60}{100}$
 of Mint. Oleaginous
 Matter — $g^{\circ} \frac{1}{100}$
 $g^{\circ} 15 \frac{31}{100}$ —

It likewise contains
 108 oz Measures of
 acid^s Gas, (besides that
 & $\frac{1}{2}$ oz measure of At-
 mospheric air. —

Driburg Water —

This water, very fa-
 mous abroad, rises in
 a pleasant plain, half
 a mile from Driburg in
 Westphalia.

The Win^r. Gallon
 contains —

of cal^e. Earth comb^d. w^t
 Vit^a. Acid in form
 of a Selenite $\text{Zl } 9^{\circ} \text{XIV}$
 of D^r. w^t. acid Gas $\text{Zl } 9^{\circ} \text{IV} \frac{1}{2}$
 of Mag^a. comb^d. w^t
 acid Gas -- $9^{\circ} \text{XI} \frac{3}{4}$
 of Mag^a. comb^d. w^t
 Vit^a. acid - or Ep-
 som Salt -- $\text{H. } 9^{\circ} \text{XIV}$

of marine Salt of
 Mag^a -- $9^{\circ} \text{IX} \frac{3}{4}$
 of Irons comb^d. w^t
 acid Gas -- $9^{\circ} \text{II} \frac{3}{4}$
 of Sea Salt -- $9^{\circ} \text{II} -$

$\text{ZIII } 9^{\circ} \text{XIV} \frac{3}{4}$
 It moreover contains
 208 oz measures of aci-
 dulous Gas (besides
 $\frac{1}{4}$ oz measures of At-
 mospheric air.

Sevil Holt Water¹⁹⁸
 Win^r Gallon contains
 of Selenite Salt $\text{Zl } \text{H. } 9^{\circ} \text{VII} \frac{1}{2}$
 of Ep^som D^r $\text{ZII } 0^{\circ} 9^{\circ} \frac{1}{4}$
 of marine argil-
 laceous Salt $\text{L. } \text{ZII} \dots 9^{\circ} \text{XVIII} \frac{1}{4}$
 of marine Salt
 of Mag^a -- 9°XVIII
 $\text{ZVI, H, } 9^{\circ} \text{IV.}$

It moreover contains
 12 oz measures of acide-
 lous Gas, & 2 of Atmo-
 spheric air. -- $\text{H. } 2 -$

These were measured in
 temperate air, under
 the mean pressure of
 the Atmosphere. --

H^e Water well saturated
 w^t.

199
with fix'd air or aerial
acid, dissolves in mo-
derate heat about $\frac{1}{100}$ of
part of its own weight
of Magnesia. —

Buxton Water

Minr Gallon contains
of Cal. Earth comb'd
wth acid Gas — $9^{\circ} 11\frac{1}{2}$
of Selenite — $9^{\circ} 1\frac{1}{2}$
Sea Salt — $9^{\circ} 111\frac{1}{2}$
Marine $\frac{1}{2}$ of Mag^a $9^{\circ} 1\frac{1}{4}$
Iron combin'd with
Acid Gas — $9^{\circ} \frac{1}{20}$

It moreover contains
4 oz measures of phlo-
gisticated air, & 2 oz
measures of acidulous
Gas, besides V.L. —

Sea Water — Minr.
Gallon taken off Brigs
Elmstone — 400 yards
within the mark — Wind
strong S.E. Tide making
Augst 1781 — contains
of Sea Salt or $\frac{1}{2}$ of 9°
3, 13, 11 $\frac{1}{2}$
of Marine Salt
of magnesia — 1.. 11.. 19 $\frac{3}{4}$
of Gypsum — " 3.. 19 $\frac{1}{4}$
5 .. 9 .. 2 $\frac{1}{2}$

It moreover contains of
Acid. Gas, separable in $\frac{1}{4}$
heat of boiling water, one
oz measure; of Atmosph^{ic}
air 4 oz measures; of phlog^{is}
air 1 oz measure; & of oleo-
ginous phosphorecent mat-
ter a quantity too small
for measure.

$\frac{3}{4}$ lb. *Dulcamara*

aq. pur. lib. ss. coq.

ad lib. 1. fig. col.

sumt. $\frac{3}{4}$ 11 3. 9. Gang.

Dos. ad lib. quot.

It cures Lepros. 21 of 23.

The surface is washed

with a stronger decoction.

Symptoms: palpitation; nausea,

Agitation are some-

times produced, when the

Dose is too great. It

seldom does much till

after 8 days. -

Brighton from Willan

on 11th. p 145 -

Ormskirk Medicine 200

$\frac{1}{4}$ - a small tea-spoonful

of $\frac{1}{4}$ lb. oyster shell; a

case knife pointful of roach

alum burnt; $\frac{1}{2}$ of ameri-

can bole; as much Elecam-

pane Root as will lay

on a silver sixpence;

$\frac{1}{2}$ of ash. coloured ground

Liver. wart - all in powder.

well mixed - $\frac{3}{4}$ 11 is a full

Dose in a glass of

Port - taken fasting, & the

Patient must fast for 2 or

3 hours after. Makes

Cement for Galvanick

Yellow Wax $\frac{3}{4}$ 11

Resin $\frac{3}{4}$ 11 Fine Brick

Dust $\frac{3}{4}$ 11

201 Astringentia from
Dr Cullen -

R P. Gum. Arab. ℥ss

alum. rup. ʒi. iii.

Sack albi ʒi. x. ii.

Dos. 3^{ta} q. hora.

R Pulv Alum Rup.

P. Cort Cinnam ā ʒi

Cons. Rosar ʒi

Syr. q. s. f. ^{re. nata} El. - ʒi. 3. ind.

R P. G. peruv ℥ss

alum — ʒii

Cons. Ros — ʒi

Syr. Ros. q. s. f. ^{re. nata} El. - ʒi. 3. ind.

R alum. Rup.

Terra Lap. ā ʒi. V.

f^o pulv. bis ind. sum?

R alum. Rup

G. Kino -

P. G. per -

- Cinnam ā ʒi. V.
a. mane.

R Cort Luere ℥ss

coq. ex aq. libi ad libps

cola. adde alum. ʒi

Sack albi ʒi - Gargar.

R aq. Rosar — ʒi. vii.

acet Sullit ℥ss

Sack Saturn Hi Solve

her chart. cola. pro Sol

Syrup. Viol. or Ros. may

be used insted of Acet. Sull

R Terra Sapon —

Cort Cinn. Cort. ā ʒi

G. Arab. — ℥ss

aq. bull? — ʒi. viii di-

gere, subinde agitans her

hor iii - cola. Liq. calido

adde L L ʒi. x. ii.

Syrup Diacod ʒi. ii.

Loch. Diarr. argente-

R. Loris. Ros. $\frac{3}{11}$

P. Terr. Japon

- alum Rub. - a $\frac{3}{1}$

Lyo. Lem. q. s. ft El. ten.

Loch. II. ind. —

R. P. Gallorum 9^{th}

G. Arabici $\frac{1}{1}$ ~~th~~

ft pulv. Mane & V. —

R. Uvae Ursi $\frac{3}{1}$

Pulv. prun alb. $\frac{3}{1}$

Lyo. Cort aurant q. s.

ft Elect. - Dos $\frac{3}{1}$ ind.

R. Flor Balaustr.

Cort gran. cont a $\frac{3}{1}$

G. Arabici — $\frac{3}{1}$

Aq. feruent $\frac{3}{1}$

dig. h. 3.° - colat. - adde

Aq. Lem. sh —

Syrup Diacod a $\frac{3}{1}$

2 L. g. X L. ~~th~~ - Strength
in mixture. Loch II ind.

Bitters — 202.

R. Rad Gentian $\frac{3}{1}$

Cort Limon — $\frac{3}{11}$

Rad. Zinzib vel

Sem Loricin — $\frac{3}{1}$

Aq. Bull. lib 1

Extr Glycyrr — $\frac{3}{11}$ In

fruct & per dies alig-
cola —

R. Rad Columb $\frac{3}{1}$

Extr Gentian $\frac{3}{1}$

Sal Martis 9^{th} XVth

nil q. IV. - Dos 2.° vel 3.°

For Lynamche Malona

R. Piperis. parvi rubri

Loch. II. - vel sup. Layenna

Loch III,

Salis huri Loch. p. II -

Contunde et adde

Aq. bull. $\frac{3}{1}$ VIII - Cola et

ad. Aceti fort $\frac{3}{1}$ VIII ~~th~~ ~~th~~ ~~th~~

Loch. am Lemch. hq adu
Mr. Leckers P. Linist

203 Cordials

R aq. M. hip. $\frac{z}{iv}$
 - Succi sp. $\frac{z}{ss}$
 R Lav. B. com $\frac{z}{i}$
 Syr. $\frac{z}{i}$ M

Dos. $\frac{z}{ss}$ subinde

R aq. Lenn. $\frac{z}{ii}$
 - Nuc. mosch. sp. $\frac{z}{ss}$

Syr. Laryoph. $\frac{z}{ss}$
 Spt Lav. c. $\frac{z}{i}$ M

Dos $\frac{z}{i}$ —

R aq. Lin. $\frac{z}{ii}$
 Spt Lav. c. $\frac{z}{i}$

- Sal. Vol. Oleos. $\frac{z}{xx}$
 Syrup — $\frac{z}{ii}$ M

R Camph. $\frac{z}{x}$
 Spt Vini $\frac{z}{i}$ vel $\frac{z}{ii}$
 Gum arab. $\frac{z}{ii}$ Bol.
 bis ind.

Collyrium

R Yttr. albi $\frac{z}{i}$
 aq. destil. lib.
 M. —

R Rad. Solumb $\frac{z}{ss}$
 Cort Aurant $\frac{z}{ii}$
 Inf in aq. bull.
 $\frac{z}{x}$ her 4 horas

Colat adde Spt

Vini Gall $\frac{z}{ii}$
 Dos. $\frac{z}{ss}$ L. ind.

Cathartics —
 In Dropsy

R P. $\frac{z}{ii}$
 Sal. L. Lewi $\frac{z}{i}$ - $\frac{z}{ss}$

Aq. — $\frac{z}{iv}$
 Syrup $\frac{z}{ii}$ M

sum. 3^o Vicibus.

R Aloes Soc $\frac{z}{iv}$
 G. Gambog $\frac{z}{i}$
 Sy. q. s. f. pil $\frac{z}{v}$ q.

R Succ: aloes
 Extr Gent $\frac{z}{i}$
 Sal Chalyb. $\frac{z}{xv}$
 Sy. q. s. f. pil $\frac{z}{v}$ q.
 sumt $\frac{z}{ii}$ h. P. —

R G. Guac
 Sacch albi $\frac{z}{i}$
 lere - dein adde
 Aloes. Succ: $\frac{z}{ii}$
 Nuc. L. Arab

Pulo Land. mund
 lere iterum et
 ad. Nuc. G. Ar. q. s.

f. pil $\frac{z}{v}$ - sumt $\frac{z}{ii}$ h.

R Ext Gentian
 Aloes Soc - $\frac{z}{i}$
 Sal polychn. $\frac{z}{i}$
 Sy. q. s. f. pil - $\frac{z}{ii}$ h.

R $\frac{z}{x}$ Jalap $\frac{z}{ss}$
 Syrup — $\frac{z}{i}$ M

Dos. Loch $\frac{z}{ii}$ —

R Fol Lenn. $\frac{z}{i}$
 Nuc. mosch. h. $\frac{z}{i}$
 Sal G. laub - $\frac{z}{i}$ ss

Sacch. rub $\frac{z}{i}$ ap.
 Aq. bul. lib $\frac{z}{ii}$, Dig.
 hor. h. - ad. $\frac{z}{x}$ sumt
 $\frac{z}{iv}$ - Dos $\frac{z}{ii}$ vel 3^o
 O. M. vel bis ind. —

Dysentery -
℞ P. Thec ℥i
℞. Rhin ℥i. ft
℞℥ XX - Cap^{ty} m
4th ind. - Proper
towards the end
℞ P. Doveri ℥i

En^a. Anod^m

En. ex Salep ℥iii

Oleo ℥ss.

℞ Alum R^{pp} ℥i

℞ Rhin ℥ii

℞ Ros. q. s.

℞ Hil - Sumt^m 1^m

4th ind. -

Decoct Lusit.

℞ Sarsa ℥vi

Guaiac -

Sapafra

Santal rub.

Glycyrr - a ℥ii

Merereon ℥i ad ii

Aquas lib^{ss} XXIV.

Loque ad lib^{ss} XXIV.

Decoct. Tam. c. Sen

℞ Truict Tam. ^{ms} ℥vi

℞ Crem Tart - ℥ii

aq. lib^{ss} XIV coq.

ad lib^{ss} X - Sub fin.

coct. adde

℞ Col Lemm ℥iii

℞ Cola - Dos. lib^{ss} ad i.

cum Syr. c. Rhos ℥i.

Decoct Sarsa

℞ Sarsa mas ℥iii

Aq. lib^{ss} vi coq ad

lib^{ss} IV et cola.

Decoct Sars. ℥i

℞ Rad Sarsa ℥iii

Merer. contus ℥ii

Sapafra ℥i

Rad Glycyrr. ℥vi

Loque Beni igne²⁰⁴
in aq. lib^{ss} vi vel viii
ad lib^{ss} IV. -

Dec. Cort her -

℞ Cort her ℥i

aq - lib^{ss} p. coq

ad lib^{ss} i. -

Dec. Gretaum

℞ Greta ℥i

℞ G. arab ℥vi

Loq in aq. lib^{ss} p ad lib^{ss}

adde Nuc Mosch ℥i

Syrup. q. s. -

Decoct Geof. Inorm

℞ Cortic Geoffrai ℥i

Loq in aq. lib^{ss} i lenit

vase clauso ad lib^{ss}.

Cola -

D. Verbasci

R. Col. S. 3i

Aq. lib III Coq.

ad lib II. Col. Mt.

ind. h. v. pro Diar.

Demulcentia

R. G. Arab 3i

Aq. bull 3vi

Syrup- 3i M.

R. aq. Linn. 3i

- Frontis 3v

Ol. Oliv 3i

Spt. L. g. t. aliq.

Syr. balsam 3p

R. Mucil G. Ar. 3ii

Ol. Oliv 3i

Aq. Front- 3iv

Syr. Bals 3p

Spt. Vitr. ten. q. s.

ad grat. gustum.

205

R. Sperm. Lat.

Sacch. alb. a 3iii

Cons. Lynos.

Muc. G. Ar. a 3ii

Aq. 3iv S. A.

R. Bals. Sulph 3i

R. Rad. Helen 3i

tere simul et

ad. Rob. Sambuc

Exlr. Glycy. a 3i

Syr. Bals. q. s.

ut ft. pil g. v. Cap 3. h.

R. Flor. Samb. 3ii

Aq. bul. lib I

Macer. hor. 2. vel 3.

3ii 3tia q. hora

R. Col. Tufail 3ii

Herb. Pariet- 3i

Flor. Mala 3p

Conco. ft. Mater.

no I

R. Sem. Anis 3i

Rad. S. R. 3p

Ext. Glycy. 3p

Mater. no II-

Coq. no I in aq

lib II ad I. - adda

no II Men. V. - Col.

Syr. Pect. Decoch.

2 Spoonfuls - 2. 3. 4.

4 times a day -

Diuretica

R. Millep. 3p

Sem. Dauc. Sylv.

Sapon. Shep. a 3i

M. - ad. Muc. G. Ar.

q. s. ft. pil g. v. Cap

3, 4, vel 5 o mds

R. Sem. Dauc. Sylv.

Bac. Jun. a 3ii

Conco. aff. aq. bul

lib I - Degere per

noct. sola &
act. ag. Jun. p. 311
Loch. 2 vel 3 post pil.

Diaphoretica

R. q. Guaiac
Sacch alb a 311
Extr. Gent. 31
M. q. Arab. q. s.
ft pil. Dos 20. 3 pil.

R. ag. Ros 311
Syr. Lamyoph. 31
Part Emet g. IV
solva Loch 20. 3 mod.

R. Rad Sars. 311
Syr. Sant rub 31
Loq ex ag. lo 11 Vad. II
Media. loc. ad
Post Rad Meren 311
et sub finem

adde
Rad Glyc 31. 1. loc
aperient Decoctio
sumt. libl - II ind.
aug^m Mez^m nisi
calor nimis cre^{at}.

R. q. Guaiac 31
Sacch alb 31
Part Emet g. VII 31
tere simul. adde
Castor Ruf. - vel

Extr Gentian 31
Muc. g. Arab. q. s.
ft pil. - Dos 20. 3 mod.
R. Elix Guaiac. Vol 311
gl. X Lex Sal. v. ag.

R. Int Minder 311
Syr. Alth 311
Part Regen 211

Enemata

pro Dolore Ventris
R. Inf Lini 311
Gum amm. 311
En. salidum
R. ap. sat. 311
Decoct form 311

R. ag. huleg 311
ap. pectid 311
ft. En. pro Inf. febricit.

In Diarrhoea
R. P. Salep. coch. p. 11
ag. bull. 311
L. Lig. L. ft En.

Pro Ischuria

R. Camphor 31
P. q. arab 31
acet Still. 311
Inf Lini 311
ol. 311 ft En

207 En. Amulans

R Sem Sincp. integ

- Lini $\frac{1}{2}$

Aq. bull $\frac{1}{2}$ Mada

ra her horii - Cola

En. Garmin^m

R herb. Absyn $\frac{1}{2}$

sem Anis cont $\frac{1}{2}$

Aq. lib III coq. ad lib

Col. ad Ol. $\frac{1}{2}$ -

En. Terebinth.

R Inf. Lini $\frac{1}{2}$ VI-

Aq. Puleg $\frac{1}{2}$

Tereb. com in ovi

bitell. solut. $\frac{1}{2}$

Olei $\frac{1}{2}$ p En.

En. Carm. sat.

R Aps. sat. $\frac{1}{2}$

Aq. puleg $\frac{1}{2}$

Ol. $\frac{1}{2}$ 3rd

E. Daureticum

R Tereb. com. $\frac{1}{2}$

solo in Vil. Oli-

ad. Inf Lini $\frac{1}{2}$ VIII

Lamph H

solve in Ol $\frac{1}{2}$ H

Emeticum f-

R Vtr. alb $\frac{1}{2}$

solo in Aq lib IV-

sum $\frac{1}{2}$ VIII - donec

Elect^m pro Gon^o

R Bals. Cot $\frac{1}{2}$

R C. her. $\frac{1}{2}$

- Rhai

- Cinnam^a $\frac{1}{2}$

1st Elect^m sumt

Col. h. 2. o. 3rd ind.

Emph^m Lereum

R Sev. Ovil

Resin. alb. $\frac{1}{2}$ IV

ser. flav $\frac{1}{2}$ H

Epence q Mado

R Rtt V. rect lib

alum trili $\frac{1}{2}$

G. Lamph. $\frac{1}{2}$ IV

Ep. Limon $\frac{1}{2}$

Alkal. Vol. $\frac{1}{2}$ IV

Expectorantici

R Rad Sil. exp. g^x

Emul. Camph.

Bals. Sulp. a^zl

Troch. Beck. M. $\frac{z}{ll}$

aq. Sal. q. s. ut

ft pil. - g^{iv}

Dos 3 o 4. tuj. ing^o

R q. Am $\frac{z}{p}$

Ext Glyc. $\frac{z}{p}$

ft pil. - g^{iv}

Lum 1, 2, o 3 li.

R Her. Lat. $\frac{z}{ll}$

Sol. in Vit Ovi

Lact. Amm $\frac{z}{viii}$

Syr. Loc. $\frac{z}{vii}$

Lum $\frac{z}{ll}$. 6^{ta} q. hora

Haust^{us} in Hydrope

R Lucci. Ind. h^zp

ad $\frac{z}{p}$ -

aq. M. hip $\frac{z}{p}$

Syr. ole. Rham $\frac{z}{ll}$

bis ind. host an

gulas Lact Emul

Arab $\frac{z}{vii}$ -

Haustus Guaiac.

R q. Guaiac g^{xv} -

Sacch alb g^x

tere et adde

aq. M. hip $\frac{z}{p}$

bis ind.

Gastrodynia -

R P Rhoig^{xv}

Mag. alb $\frac{z}{p}$

L. L. g^{lv} -

aq. M. hip $\frac{z}{x}$

Syr. $\frac{z}{ll}$ ft Haust^{us}

Icterus - cum

humore reg^o Epigas-

ting^o ling^m et

ol. Lecut. vicif^m

R Sap. Venet $\frac{z}{ll}$

q. Amm $\frac{z}{p}$

mil q^o V - d. 2^o 4^o ind.

R Sal polychr-

coch. h. alb. adstr.

Injectionis - in

Gonorrhoea

R opii $\frac{z}{p}$

Syr Lini $\frac{z}{iv}$

ling & fort. - in ovi

vel. sol $\frac{z}{ll}$ M.

Inf^o Anodyna

R opii $\frac{z}{p}$

P. q. Arab $\frac{z}{p}$

aq. bull. $\frac{z}{lll}$ ft Sol.

adde ol. $\frac{z}{p}$ -

209. n.º and. asbringº

℞ Sauch Sat g^{ss} VIII
solo in Sol Opⁱ 3ss -
M & V — 2

Inf. ad Vagina eup
hural. absclend.

℞ Tereb. com 3ss
solo in Ovi Vitell.

ad Inf. Lini sp^{ss} lib
agit. Phal. Inf. paux.

Inf. pro Gonorrhœa

℞ Calom hr. 3ss
M. q. Arab 3ss

ad. Aquas 3ss -
libr. albi g^{ss} VII 1/2

Inf. 3^{ss} 4^{ss} ind^{ss}

℞ aq Ros. 3ss

Sauch Sat - g^{ss} 2ss

Solve — 2

Infusions -

℞ Rad. Ananth.

incis - 3ss

Vini albi lib^{ss}

Dig. bid^m et cola

Dos 3ss ad 3ss ind^{ss}

ex Inf. Lini - in

Lepra - Herpete -

Am^a -

Inf. Japonic -

℞ Terr. Sap.

P. L. Linn. 2ss

affunde aq. fer 3ss

dig. per horam

et colat addes

Syr. Diacod 3ss

Inf Arnica M.

℞ Fol arnica 3ss

Aq. bull. lib^{ss} -

inf. per hor. III. 1/2

against Palsy

Inf Digitalis

℞ Fol Dig. 3ss

Aq. lib^{ss} Maxima

per hor. 2^{ss} leni

calore - Cola

Dos 3ss. bis 3ss

Inf. Belladon

℞ Fol Bel. op.

exsicce - 4

inf. per noct - in

Aq fer. 3ss X 1/2

cola. Dos 3ss 10 M.

Sulep. huiros

℞ huiros ℥ⁱⁱ

aquas ℥^{iv}

Syr. acet. a ℥ⁱ

M. D. ℥ⁱ 3^{lia} q. hora

Sul. Sordiacum

℞ ag lib^l

Sp^t V. rect libⁱ

Sp^t Lal arom

Tinc. Croci a ℥ⁱ

Syr. lib^{ss} M

Sul. Sordens

℞ S^g Jap. ℥ⁱⁱ ss

ag - libⁱⁱⁱ

Sp. V. rect lib^{ss}

L L ℥ⁱ

Syr. ℥^{viii} M

Miscur. Pector.

℞ Sherm Lat.

Sacc. opt a ℥ⁱⁱ

Bals Tolut ℥^{ss}

tere opt. et acde

M. G. Arab ℥^{ss}

inf. grad^m

ag Linn St. ℥ⁱⁱ

- Rosar ℥^v

Sack alb chr. ℥^{ss}

L L g^{lo} XL - Dos -

Coctⁱⁱⁱ 4^o md. Sul.

Misc^a mo fono^a

℞ M. G. Arab ℥ⁱⁱ

acid Vitr. g^{lo} XX

Bals. Copaib ℥ⁱ

ag - ℥ⁱⁱⁱ

- Linnam

Syrup a ℥ⁱ

Coctⁱ l. bio v. 3^o md.

Misc^a Sistens²⁰

℞ a. m. pip ℥^v

Syr - ℥ⁱ

Oc. Laner.

Long. Jap. a ℥ⁱⁱ

L. L. g^{lo} LX M

Sunt. ℥^{ss} 3^{lia} q. hora

Misc^a Diuretica

℞ a. m. pip ℥^{vi}

Sp^t Sul. Dul. ℥ⁱⁱⁱ - ℥^{ss}

Syr. ℥ⁱ - Lat ℥ⁱ 4^o md.

Misc. Pector.

℞ Ag. huleg ℥^v

G ammon ℥ⁱⁱ

Sy. Balsam

ag Linnam

Acet Scell a ℥ⁱ M

210 Ophthalmia ut

Head ack

R Turp Men 9^{ss}

P. Liquor 9^{III}. aug^r

Dos. ad 9^I. - Snuff -

R Pulv. Ari -

Oxymel Colchic -

R Rad L. aut. 3i

Acet libl Macera
ra per biduum -

Col. ad. mellis

libll. Coq. ad spiss^m

n. De Haen -

Oleum ficus

R Herba 9c libll

Ol. Oleo liblll

Coque bene et fag^a

Palsey

R Cort Mercur 3i
aq. libll. coq. ad l.

Dec fero. ad.

Rad alth inc 3ii

Col. Sum. quod. h. Dos.

R Pulv Pulv 3ii

Grem Tart 3ii

Sach - 3^{ss} ~~in~~

Pot. Antkphl.

R L. Tart 3ii

Sach - 3^{ss}

aq. libll. solve.

Pot. Imperial

R L. Tart 3ii

aq. bull liblss

Cort Lim -

Sach alb a. q. s

ad quet. gratum

Pulo Antem

Febrius Jacobi

R Sal Nitr p. VII

Ant. Crud. part W

in Crucib. ign.

def^r -

Pul. in Hydrops

R Pulv. exp. 3i

- Mercur 4 -

Lya. q. s. ut fit

mapa. in p. XX

du. - Sum I. M^{ss}

Pulv. in Dyspep.

R Sem Cardam 3i

Lim. Mart 3ii

et du. in hiel

XV. Sum I. 3^{ss}. L^{ss}.

Pul^a Germinat^a

R ap. fald 3ii

alo. Nocot

Sal mart -

Pul. Lenz a 3i
El. Prop. q. s. 1^{ss} pul
9^{ss} W. Dos. 4. 5. alt. 8.

Quercus
R. L. Querc. $\frac{3}{11}$
Log. ex. aq. lib. $\frac{1}{2}$
ad lib.

For H. Sloan's
Receipt for Otho
Thalmeid -

R. Tulas. $\frac{3}{1}$
Lap. Hematit. $\frac{1}{2}$
Albes. $\frac{1}{2}$ p. $\frac{1}{2}$ q. $\frac{1}{2}$
Pearl. $\frac{1}{2}$ p. $\frac{1}{2}$ q. $\frac{1}{2}$ IV
At & concludes
in Morfar Marm
dece adde

Adhis Viter q. s.
at f. Liniment.
App. aux. ocul
m & V. -

Mr. Peller after
scrubbing the
ednata, recom

mends a bath
of warm milk
& water - weak
solutions of Lac
-char. Saturni
night & morn
the foll.

R. mer. trid. rub
Lap. Cal. $\frac{1}{2}$ p. $\frac{1}{2}$ a $\frac{3}{11}$
Litharg. $\frac{1}{2}$ p. $\frac{1}{2}$
Tulas. $\frac{1}{2}$ p. $\frac{1}{2}$ $\frac{3}{11}$
Linnab. nat. $\frac{1}{2}$
F. t. hulo. tenuis.
At cum ax-
ung. horan $\frac{3}{11}$
adde
R. al. perus $\frac{1}{2}$ q. $\frac{1}{2}$ IV.

For Eruptions on
the face
R. Lac Sulph $\frac{3}{11}$
Lacch Saturn $\frac{1}{2}$
aq. Ros. $\frac{3}{11}$
ag. phal. app.
aux. m & V.

Decodum Lu²¹¹
itanicum
R. Rad Sarsa
Merer.
Glycy. a $\frac{3}{11}$
Dig Rhod.
Quiaie
Sarsa
Santal. alb.
- mtr a a $\frac{3}{11}$
Antim. crud. $\frac{3}{11}$
Inf. in aq. bull
lib & her horas $\frac{1}{2}$
lenter brilliant
in vase clauso
per hor. XII. Col.
Stoughton
R. Genhan
Lort aur. a $\frac{3}{11}$
sem. Gardam
Loci angl.
Lacinel. a $\frac{3}{11}$
Lort um. gall. lib.
Dig. sine calore
Thurham's Tinct.
R. P. L. perus $\frac{3}{11}$
Lort. aurant $\frac{3}{11}$
Rad Sarp. V. $\frac{3}{11}$

Locii iiv

Lecun iiii

Spt om. Gal. $\frac{3}{4}$ x x m

Vs digere sine calore.

Lip Salve

R Pomat. moll. $\frac{3}{4}$ viiiLena flavo $\frac{3}{4}$ vi

Rad anchus

Therm Leli a $\frac{3}{4}$ ssRals. peruv $\frac{3}{4}$ iiAmbergis g^l vi

Solve in vase fec.

Leli - coletur.

Newaris Drops for

w^h £1000 were

paid to a German

by Marg^r of LothianR Castor Liber $\frac{3}{4}$ ssAloes Socot $\frac{3}{4}$ iiiiLocii ang. $\frac{3}{4}$ iiSal abrut. $\frac{3}{4}$ ssOpii puri $\frac{3}{4}$ iSpt om. rec $\frac{3}{4}$ viSolid. red^m in

hulo. Vs diger.

per Dies iv - Coletur

ad. Lambh. $\frac{3}{4}$ i - Dos g^{ss} x lReceipt for ast^t. Injⁿ LondR Lap. Lalam. pp. $\frac{3}{4}$ iv

Lambh. solut in Spt. om.

Conuc. L. arab. $\frac{3}{4}$ iv

Aq. Lib vi. f. t. Inj.

Dr Grant's receipt for

Lynanche Maligna

R hup. Layens. recent coch^{ll}

vel succ. coch. iiii

Sal mar. coch. cumulat.

contund. Opt. in pulp.

hunc infunde in aq. bul. luf.

Post hor. xii vel 24 cola

Vs ad. Aret. Opt. libss.

Lemel. in vase vitreo -

Dos. hno aq. xii an. vel sup.

Loth. 1 vel 2 om. remch.

infra xii - $\frac{3}{4}$ ii - hno infan

libus Loth. havo. -

Do the vesiculae seminales contain ^{semen} ~~semen~~
No. 1st Gland different. Thick & brown
in the vesiculae; thin & white in the
vas Deferens. - Not owing to putrefac-
tion, for Mr Hunter examined a man
whose head was shot off, a few mi-
nutes after death. - 2^d A man in St.
George's Hospital who had one testicle
cut off many years ago, the vesicula
of that side was as full as that of
the other. Mr Cruickshanks saw the same
thing in a man whose vas Deferens
was grown together. - 3^d In some Ani-
mals, ex. gr. the Deer, they cannot contain
semen as they enter the urethra by a
duct separate from the vas Deferens.
4^{thly} Their insides seem glandular & their
substance is thicker than necessary for
containing bags. - All Carnivorous Ani-
mals want them except the hedge hog, &
in him they are very large. - In a man
Mr Hunter found the vesicula without

2/3. ^{at} opening into the urethra, yet full of fluid. In castrated cattle he finds these like all ^{the} other parts of generation smaller than usual, but they contain fluid.

Lamphure in Skt of wine has been recommended in hernia humoralis. Must be a poultice recom^mended in Ghordae. Mr Winslow recommends it to the breeders of those who are troubled wth erections.

In uterine hemorrhage when the placenta is over the os, the flooding happens during a pain; in other cases the contrary happens.

Mr Cruickshanks found that the loose Cartilage w^h had bound the knee in one case fix'd. Might this warrant confining & prepping?

In opening women after puerperal fever, peritonaeum infl^d.

A boy bit ^{by} a mad dog died in 5 days after hydrophobia w^h came on 6 weeks af

ter the bite - Some red spots about ^{the} end of the esophagus & beg. of ~~trachea~~ ^{glottis}.

Mrs Uno died of constipation. When opened the viscera were all much enlarged & distended with air & feces, down to the beginning of rectum or middle of sigmoid flexure where the distention ended in a hard tumour. Upon taking it out, a cut was made into an abscess lying between the colon & psoas muscle, & in the abscess there was a plumb stone. The abscess communicated with the gut & at that part the gut was constricted for about $\frac{1}{2}$ an inch. Probably the stone lodged here & wrought its way into the cellular membrane.

Crude mercury had been given, & was every where found in the small guts in form of black powder - no where more than 3fs.

Mrs Jeanie Marshall after dynamite maligna was opened. The fauces, esophagus, mouth of the larynx & opening of the nose into the pharynx were encrusted with a brown very fetid

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~~cast~~ evidently of coagulable Lymph. The parts below were evidently inflamed, but no ulcers or sloughs. The esophagus was almost shut up. -

A patient of Dr. Gullen's in Epilepsy was bled in the feet. then no buff; but between the feet, buff always. - Is this a proof of life in the blood? The feet by affecting the brain removed the ^{ch} phlog. diathesis, consequently the buff; when the reaction returned, the vessels changed the blood - then buff appeared.

A Woman took arsenic moles of Mag^a. Died - viscera externally sound. - Stomach on the inside was black in many parts, in others of a dark red. & in these, considerably thickened. In some of these the inner coat was mortified, in others, only inflamed. They were about the size of a shilling & all of them contained extravasated blood. -

Eliz. Wallbert - and Lase Brook

21/6

1789 March 24th. Died - Opened next day -

Circumference before opening 3 - ^{that Inches} 1 1/2

Length. Encl. to Os Pubis 1. 6 -

In the upper part of the abdomen a quantity of water - 13 lbs were taken out - The stomach seemed small - so did the Liver - This last adhered in every point to the Diaphragm - Spleen very small

Both kidneys were diseased - They were large & flaccid - & to the feeling seemd divided into a number of Lobes, each head, the thin & separated from each other by a slender membrane. The ureters were much enlarged.

From the rim of the pelvis two tumours stood out, (and plates) diff^t in appearance & in situation, but connected together by a firm thick substance. Both had numerous adhesions on their surface, & when these were dis-

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lected off they seemed to differ in the following particulars. The ^{right} tumour was pretty equal & uniform over its surface, & when pressed yielded equally in every point. It lay from the umbilicus down to the pelvis filling the whole diast region.

The surface of the left was unequal. In some parts, especially on the superior ridge, it looked like distinct vesicles, transparent & filled with a fluid almost clear. It appeared unequally soft & hard. It did not reach so low as the right tumour, but it rose higher, as is expressed in the plate; but one part of it could not be seen till the greatest part of the fluid was drawn off. This superior portion ran along the spine, & lay on the diaphragm, in size & shape resembling the head of a child. The circumference (measuring from the root to the top of the left) was about 16 inches; from the umbilicus down to its lower part about 11. - Circumference of the right, 13 inches
Diameter - 9 -

Upon opening the right tumour we found it to consist of 3 separate cells, one of w^h (over the most external & lowest) contained a quantity of fluid apparently tinged with blood. Another cell ~~was~~ ^{the} small size of this contained a quantity of glairy pendulent fluid; the 3^d w^h was the largest, & contained $\frac{4}{5}$ th or $\frac{6}{10}$ th of the whole fluid, was filled with similar glairy fluid; the fluid contain'd in all the 3, amounted to $\frac{1}{2}$ lb. The coat varied a little in thickness, & from the inner part a multitude of fatty excrescencies from the size of a walnut to that of a pea were suspended. The left Tumour differed from the right in internal structure no less than in outward appearance. The upper promeneries contained a fluid little diff^t from that in the abdomen. Below these lay a chaos of cells, some containing an ounce some a pound of fluid w^h differed every where both in colour & consistence. The coats were in some places above an inch thick, & were

proportionally more rigid. Some cells contained clear water; others a dun glairy matter; others a bloody fluid & others pus.

After emptying the lateral tumours, was found 3 cysts lying on the spine, & of these two contained pus, the other a glairy fluid. The lobe which ascended to the Diaphragm contained also a quantity of fluid. The fluid contained in all these last enumerated amounted to 6 lib.

For some time we could discover no uterus, altho' its situation was sufficiently indicated by the bladder which adhered to the tumour before & by the rectum which adhered to it behind. The finger in the vagina discovered nothing like the os Vincta, at last a Director being introduced, & an incision being made we discovered the inner cavity of the uterus. Its substance was moderately firm; its length was greatly increased, as the inside of its fundus was 10 inches from the inner ridge of the pubes. The ^{ext}ension appeared

chiefly about the cervix which was ^{between 2 1/2 & 3} ~~about 2 1/2~~ inches long. The fallow of the fallopian tubes was very distinct, but no trace of the tubes themselves, of the ligaments, or of the ovaria could be discovered.

The bladder was very small & red over almost all its inner surface.

The whole body was much emaciated. There was no appearance of anasarca.

2217

Nector Ross Aged 45 - A plover of a black complexion - August 20th 1789

Six years ago received some severe blows on his belly - He recovered from these, but never perfectly. About 3 months ago he began to complain of dyspepsia, pain over the abdomen, vomiting & obstinate constipation. Various remedies were tried in vain - His complaints continued & his belly swelled excessively with a feeling of obscure fluctuation, & tympanites. His vomiting becoming more severe, & the swelling of his belly increasing he was tapped on the 16th inst. & 3 Scotch pints & $\frac{1}{2}$ of very solid thin matter were drawn off. He breathed more easily, but all the other complaints continued & this morning he died.

On opening the abd. every part appeared thicker - naturally thickened, red in its colour, & in some places lured. All the small bowels adhered by their nearest folds. The ^{Pancreas} ~~mesenteria~~ was thickened & red all over. The mesentery, & meso-

colon were universally schorrous. The gut ²³² ~~are~~
almost completely obstructed in some parts,
especially about 9 inches above ^{the} insertion
into the caecum & where it runs down to
form rectum.

The Omentum was universally hard, red &
thickened, in some places nearly two inches,
in every place above half an inch.

A little fluid in the abdⁿ. —

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June 16th 1790

A Weaver in Galton middle aged came some time ago to the Hospital & complained of violent pains over all the epigastric region. The belly was extremely retracted about the umbilicus, & in many parts was very painful to the touch. In the right hypochondrium there was a considerable hardness & tension, which stretched perceptibly thro' of less size beyond the linea alba into the left hypochondrium. He had never had any liver-complaints. He was much emaciated & yesterday died.

The right side appeared after death remarkably livid, but altogether free from the hardness which I felt so remarkably before. This surprised as I expected a scirrhous Liver.

Upon cutting into the Abdomen, the mus.

cles of the right side appeared entirely livid²²⁴ resembling in this respect the colour of the intestinal folds over which they lay. A great part of the Colon, with various portions of the small guts were of this dusky hue, their vessels appearing every where distended with black blood. The Ileum just at its insertion into the Colon was remarkably small, but there appeared no morbid thickening of the coats. The Colon run up about 6 inches in a natural direction, but from this point it started out & cross'd to the left side, not be low but above the Liver. This cross part was apparently strangulated, insomuch that it was very much distended with wind & feces & uncommonly black. From the point at wh^h the Colon reaches the left side, the gut was shrivel'd to the size of an ordinary thumb, but there was no sign of schismus. Through

out this shrunk tract, small balls of faeces were found disheated, & about 4 inches from the anus there was a considerable congestion wth distending that part of the gut to a size nearly natural. The Colon adhered to the fundus of the gall bladder & to some part of the Liver near the Gall bladder, & these adhesions produced a kind of constriction on the right end of the arch, which rose from this very point. The left end seemed constricted by the arch's depression, for the head of the colon on the left side lay higher than the place at which the arch entered it. The Liver was quite natural. The spleen was pretty large. The Stomach shrivelled. There was a small quantity of water in the abdomen, but much more in the Thorax, on both sides of which there were several adhesions. The Lungs in general were healthy, excepting a few spots which were hard.

Remarks -

To ascertain whether the fluids putrefied ²²⁶ in
any disease or not, Dr Evans made 3 Expts.

1st He injected into the jugular vein of one dog
 $\frac{3}{4}$ of fresh blood from another. The dog lived.

2^{dy} He injected into another dog $\frac{3}{4}$ of blood
kept in the natural temperature till it
putrefied slightly. The animal became forth
with sick; vomited; staggered; breathed ill &
was very languid. After 5 or 6 hours it died.

3^{dy} - Blood was kept till it putrefied, and
 $\frac{3}{4}$ of it was injected. Convulsions came
on instantly & the animal expired. The
two last Expts. were repeated with the
same result.

327t Bernard's well on Water of Leith is near the level of the sea. About noon in July the Therm. in it stood at 48; in the river at 51; in the shade at 57. In Jan'y the Therm. in it stood at 43; the river 41; the atmosphere 46.

Its taste & smell are sulphureous with an impregnation of Iron. - It contains fix'd air, calcareous earth, aerated iron, a small quantity of hepatic air, & two neutral salts, viz Epsom & common salt. Meade's Thesis an. 1790. -

Transfusion tried at Paris anno 1668 on 500 human Subjects - hurtful - Benefitted 2^m. - Review Vol. 78. p 69 -

Forbidden last Century -

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Correction House Saturday April 23. 1791 - 8-
Viewed the body of Marg^t Mitchell a pro-
stitute who died on

The belly was firm & tense. The neck,
the Shoulders & Loins were more or less
livid. The right thigh & leg were black
with a number of ^{9 or 10} bags, especially two
very large ones near the buttocks.
all these bags contained a bloody wa-
ter. The right Labium Pudendi was
swell'd. Upon turning the body a g^l
of blood & water issued from the nose.
We felt a fracture in both the bones
of the leg, a little above the ankle
joint. The Tibia was broken length-
ways & the fracture ran obliquely
upwards above two inches & a half.
From the inner part of the bone a

Little above the ankles two pieces about $1\frac{1}{2}$ inch long were shaved off, besides a smaller splinter. The Fibula was broken over across about 2 inches above the outer ankle. There were some splinters about the lower extremity of the fibula. - The mortification ran along the whole leg & thigh.

The belly was distended with air, but in other respects natural.

The Thorax was sound. The pericardium contained about $\frac{3}{4}$ of bloody water. There were very slight adhesions in one part of the left side.

The head was sound. The bones were very thick but neither bruised nor broken. A little fulness on the parietal, & some stony concretion in the Vena Arachnoidea.

Glasgow April 30. 1791. ^{at 60. 230} Tho Adams Gardener
& I in Anderston was leaner than the
stout Apothecary in Hamlet. 3 years
ago he had the Influenza after w^h his
Stomach was never free from complaint.
He ate little & digested less. Complained
of extreme Cardialgia & constant hic-
cup. - During the disease he never could
vomit till a little before his death.

The body being opened we found every
thing shrivelled. The muscles thin, the
omentum without fat. The whole up-
per surface of the stomach was schi-
-rous, & the obstruction around the
Cardia very considerable. wth prepa-
-ration. - The size of the stomach
was small & it had morbid adhe-
sions to various parts, especially
the Liver & arch of the Colon. hinc omnia

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June 18. 1791 Went with Mr Anderson
to examine one Wm Gilfillan. We found
two recent scars on his head; one a
bove his nose, the other near the
crown. We found a ^{sore} ~~st~~ on, the left
shin & a swelling on the left ankle.
There was the mark of a small sore
on the right knee. -

P. 76 - or betw 70 & 80 -

Ate some fried Bacon & eggs
Incoherent & rambling in his con-
versation -

Glasgow John McMillan's Bridgegate Sep^r 3rd 1791 - Examined Alex^r Moodie. at 54. stout & apparently healthy. above the right eye two dun-coloured small spots. Near the bottom of the sternum a little to the left a wound full of blood. It was $1\frac{1}{8}$ inch long $\frac{1}{2}$ inch broad. admitted a probe 2 inches. no other external sign of violence. We opened the chest by raising the sternum. a great q^{ty} of blood & water issued out.

We found that the wound entered the pericardium; pierced thro' the heart itself near its point, & passing out at the posterior part of the pericardium terminated in the lungs wh^{ch} lay behind the heart. - Its depth was 6 or 8 inches. - Instant Death

Mr. Headericks proposals for improving
the manufacture of Salt -

Chimney higher - Soot &c prevented from
falling into the boilers -

Filter'd by cloths or strainers at
the reservoir & at the bottom of the
pumps -

Great improvement - Double - pan.
1st as at present - boiler - sal^d.
solution discharged from this into a
reservoir - from whence pumped
up into a refining pan - This
placed 10 or 12 feet above the boiler
receives the steam - heat - free from
agitation - consequence - regular crys-
tallization - less gypsum & mag^a sa-

lita. Crust taken off by a work²³⁴-
man - skimmed salt - like blown salt
blown salt is that w^h the wind
blows from the surface of ponds in
short. Evapn for bay salt. -

Flue may be carried thro the
store-house - drying - Iron plate
do. -

Apparatus betn the boiler & ref.
pan -

1st Moveable windows to regulate
the q^{ty} of steam - any degree of
heat - from 96 to 212 -

2^{dly} Tubes to convey the water -

These are connected wth an awning
like venetian blinds w^h properly
suspended over the boiler transmit

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The steam but prevent the return of the water. Thus the soln in the boiler becomes saturated. -

Thus may be crystallized a huge salt -

Lining - Dutch lay the herrings in pickle as soon as caught. ours often some hours. consequence the blood putrefies - black -

Dutch purify their bay salt use small for brine. Large for a corps de reserve. air. tight barrels -

Great obstruction - Tax. on Salt & on Fuel - Lime cheaper from Ireland - Tax on exported coals less than on those carried coast-wise - !!!

[illegible]

⊕	Δ	α	τ	μ	ζ	σ	♀	♀	⊖	⋈	Δ
⊕	Δ	α	τ	μ	ζ	σ	♂	♀	♀	⊖	
⊕	α	τ	μ	ζ	σ	♂	♂	♀	♂	⊖	⊖
♀	α	τ	σ	N	♀	♂	♂	⊖	♂	♀	σ
♀	♀	⊖									
main	τ	α	μ								

α	⊕	⊖	⊕	⊕	⊕	♀	♂	♀	SS	main	♀	Δ
τ	⊕	⊕	⊖	⊕	⊕	♀	main	SS	♀			
MS	⊕	⊕	⊖	♀	⊕							
♂	⊕	⊖	⊕	Δ								
♂	⊕	⊖	⊕	⊕								

σ	ζ	σ	♀	♂	♂	⊖	
♂	σ	♀	♂	♂	⊖		
♀	⊖	DP	♂	♀	ζ	B	♂
⊖	♂	♀					

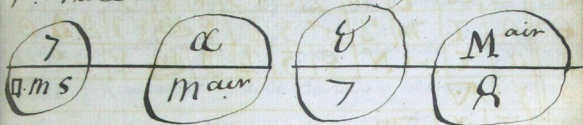
⊖ α V mild & some neutrals

V ⊖ oils & Resins

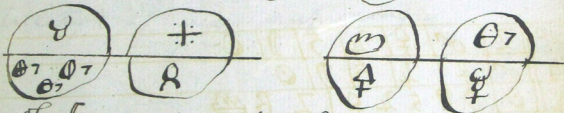
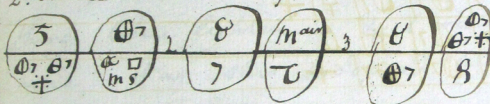
8 SS ⊕ ⊕ consequences of heat

8 Phosphor. 7 ⊕ ⊕ ⊕

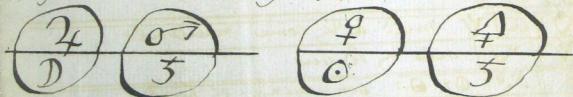
Double Elective attractions.
1st Those in mixture - watery solutions



2. In distillation - requires heat



3rd In mixture by fusion



100

□ + 3 + 21 = 24

1919

7 8 9 10 11 12

8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

(7) 11/19/1911

4

240

Glasgow June 21. 1792. part 3 of Lock
John Hart Blacksmith White lair's
Glof working at a small lock
felt himself suddenly struck on
the right collar-bone. He became
sick & faintish & his arm seem'd to
be broken. No noise was heard; no
stone found. A boy present saw some
thing like lightening & it rained very
hard. Was this produced by elec-
tricity? - very surprising -

241
Ex^{tr} of a letter from Dr Crawford to Mr.
M Linn. Feby 20. 92

By comparing the capacity of ice with
that of oil of Turpentine in the common
way, & by comp^g the cap^y of water wth
that of the same fluid, it appears that
the cap^y of water is to that of ice as
10 to 7 nearly. (not very certain) From
this it follows that the capacity of
oil of Turpentine or of ice varies, or
that Dr Lavoisier's opinion respecting the
absolute zero is not well founded, be-
cause we have a diff^t result for the
lowest point by mixing oil of vitriol &
water together.

It is not probable that the cap^y
of oil of Turpentine varies, because the
capacity of ice appears nearly the same
when immediately compared with that
of water, by mixing hot water with
ice reduced to zero, & making allowance

for the heat absorbed by the melting ²⁴²ice.

It occurred to my Assistant Mr. Guich-
shank that the capacity of ice might
be determined by mixing together oil
of Vitriol & ice. This appeared well
founded: for oil of Vitriol & ice in
certain proportions will produce much
heat; in other proportions intense cold;
& hence there is a limit between these
extremes wh^{ch} will produce neither heat
nor cold. Having found this limit, it
will follow that the sum of the abso-
lute heats of the oil of vitriol & ice
before the mixture is equal to the sum
of their heats after the mixture. If there-
fore we find the absolute heat of ol. vitr.
& likewise that of the mixture, & subtract
the former from the latter, the remainder
will give us the absolute heat of the
ice, by means of wh^{ch} the capacity can
readily be found. Now when the Expt. is

²⁴³made in this way, it appears that the capacity of ice is to that of water nearly as 9.1 to 10, at least we think so at present, but the Expts are not finished.

That the capacity of ice varies is extremely probable, because if we take the proportions of oil of Vitrol & Ice w^h at 32 will produce neither heat nor cold, & mix them at zero much heat will be produced."

244
M^{rs} Nelson for 25 years laboured under
hysterical symptoms. She was so imitable
that the smallest noise affects her, bring-
ing on fainting, difficult breathing &c; she
often pants, & something works from her
belly to her stomach. She feels pain ac-
ross her belly from the right Ileum to
the left Hypochond^m, a general uneasiness,
want of appetite & sleep, swellings of
her stomach, thirst, scanty urine, high-
coloured, made wth difficulty. She has a
white discharge from y^e vagina, since the
menses stoppd about 2 years ago: Pain
in the small of back - P. about 92 & full
Tongue clean. - a degree of delirium
at night. Jan^y 5th 1788. Jan^y 11th Died.
opened by Mr Hamilton

245
In some parts the Intestines were con-
stricted, in others distended, & from the
distension, slightly inflamed. The sto-
mach much distended. The Caecum so
long that it lay across the root of the
mesentery & reached to the right side. It
was much distended & caused the pain
across her body. No obstruction but from
spasm. The uterus small with a schen-
-rous tumour in it. Ovaria & Tubes
much distended wth blood in their veins.
No other disease in the abdomen.

In the chest, general adhesions, but
of an old date. Heart sound. No wa-
ter in any of the cavities.

Mrs Robertson In 1779 began to feel pain
& uneasiness about the head of the sacrum
wh^{ch} continued her, & increasing gradually pre-
vented her from sitting up more than 5 mi-
nutes at once. Blisters, Leeches & Campho-
-rated oil were applied; the last was of
some use for a short time. . After 2 years
in this state she went to Bourn Island
where she grew so much worse that for a
fortnight she was not able to rise, & any
attempts to sit up brought on the pain in
her back. It was perhaps 4 or 5 days after
using ~~any~~ ^{much} freedom, before she felt the unea-
siness, but it's severity was increased
in proportion to the length of the interval.

Dr Brown being consulted gave her
Saudanum, strong food & drink, & kept her
much. - Dr Cullen gave her Bark & Loma-

247
-lura ferri which removed the stomach
complaints brought on by Dr Young, but
had no effect on the back. Electricity
was tried without effect. - Her Brother
put a selow in her back but it was
so painful that it was removed. He next
applied Blisters. When applied to the pained
part wh^{ch} was exactly on the middle
at the head of the sacrum, they required
at first 3, & afterwards 2 days to rise;
whereas on the parts immediately conti-
-guous they rose in 12 hours. They found
them of use..

In 1785 She was brought to Jan
Donnel in a litter, still unable to sit
up more than 10 minutes in 48 hours.
While at Bruntsland she had tried &
till it affected her mouth & continued
it for some time but without effect.
The pain in her back was of a dull

uneasy kind, tho' sometimes sharp & dart-²⁴⁸
ing. It was attended with a sense of
weariness in the back, & sometimes pro-
duced hysteric fits.

In this state Dr. Henderson saw
her & gave her pills & liniment.

R. G. Guaiac	℥ss	R. Ung. Citrin
Lamphor	℥ss	Lamphor
Pil. Stom. III		Succini ℥ss -

Calomel gr. vii. ℥ss opt.

do. in pil XXIV Sig. One to be taken
every other night during the 2^d week
double the dose.

Before she gave up the pills she
took 4 at once. Their only sensible effect
was a pain in her stomach like a cho-
lick, which the Dr. said he wished to hap-
pen as it showed the pain was begin-
ning to move. He advised her at that

²⁴⁹
time to get up & use as much exercise
as she could. This she did, & found she
could do it without inconvenience.

When she applied the Liniment, she
felt the sensation return into her
back wth a kind of creeping, & at last
the uneasiness went away almost com-
pletely. - While confined to bed she ate
& slept well & never lost her flesh. For
a month she has been at Plankyee
waters & rides about. -

A man in Helpatrick drank lib^{ts} of whiskey & died. He became instantly delirious, his eyes red & inflamed. On dissection, his stomach was strongly contracted at the Cardia & pylorus, its inner surface inflamed & bare of mucus. -

Dr. Thorburn remarks with regard to Apoplexy that Emetics are to be used only as Stimulants. Vomiting is not hurtful as appears from the spontaneous vomit^g which is so very freq^t. Sometimes even the most acrid will produce no effect, without an antidote. Under Dr. Gregory an apoplectic woman got 3^{ss} of white vitriol, wh^{ch} had no effect. Next day, by desire of

251
a foreign Shud. she got $\frac{1}{2}$ lb of L.L.
& in an hour III of Ipecacuan, wh.
operated. Next day omitting the Laud.
he gave III of Ipecacuan 3^{ce} in an
hour, but without effect.

In Apoplexy from Ischuria renalis
or Dropsy translated to the head,
the disease may be prevented by if
ues on the head, & by slight salivation.

A Child wth hydrocephalus measured
round the head 3 feet - Ear to Ear $2\frac{1}{2}$
from eye-brow to occipital bone $1\frac{10}{12}$
from frontal to occipital bone 1. 2.
from one temp^l. bone to an^d 1. 2
Between the parietal bones - 7
Length of body 1. 6
Circumference of breast 1. 2
The head contained 4 punts & 3
mulshkins of water!! -

A woman middle-aged had a swelling over the abdⁿ with much hardness & little fluctuation. - She was regular, but at first thought herself w^t child. - On feeling the tumour I thought I felt different parts of a fetus. - Fluctuation having become more perceptible, she was tapped & a q^{ty} of fluid drawn off. She afterwards died & on dissection the whole external surface of y^e omentum adhered to the peritoneum w^t lines the parietes of y^e abdⁿ. - The omentum itself much thickened & containing about the middle of y^e forepart a great q^{ty} of vesicles from the size of a nut to that of a pea, mostly filled w^t a clear fluid. -

26³
The under surface of the peritoneum
adhered in its whole extent to a large
tumour which filled great part of y.
abd. & part of the pelvis. It seemed
not to adhere to any other viscus. It
seemed composed of two diff. sacks; one
superior & considerably larger than the o-
ther occupying the cavity of y. abd.;
the other inferior & smaller, lying most-
ly within the pelvis.

The sac seemed to communicate &
contained a greenish yellow thin fluid
amounting to about $1\frac{1}{2}$ scotch hints
among wh. floated a considerable q^y
of white fibrous flocculi, probably co-
agulable lymph.

The sides of these two commu-
nicating sacs varied much in thick.

254

-neps from that of a thin membrane
to 2 or 3 inches. The outside was
moderately smooth, of a purplish red
colour haunted with ramifications of
red blood-vessels.

The inside was very rough & unequal
having on its surface tubercles & clus-
ters of tubercles of various sizes & co-
lours, red, white & purple. on the in-
ner surface of the lower sac, for a
considerable extent these tubercles
contained substances like irregular frag-
ments of bone, diff^t in size & shape.

The uterus & left ovarium were na-
tural; the right was not found, hav-
ing degenerated into this morbid mass.
The solid mass was about 10 lb weight.
all other viscera natural. -

255
A Child in whooping-cough got $\frac{1}{2}$ gⁿ of Tar
lar Emetic in a little Cinnamon water.
It vomited violently & died suddenly.
Its stomach was found lacerated for
the breadth of 2 fingers. - Rotherham.

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